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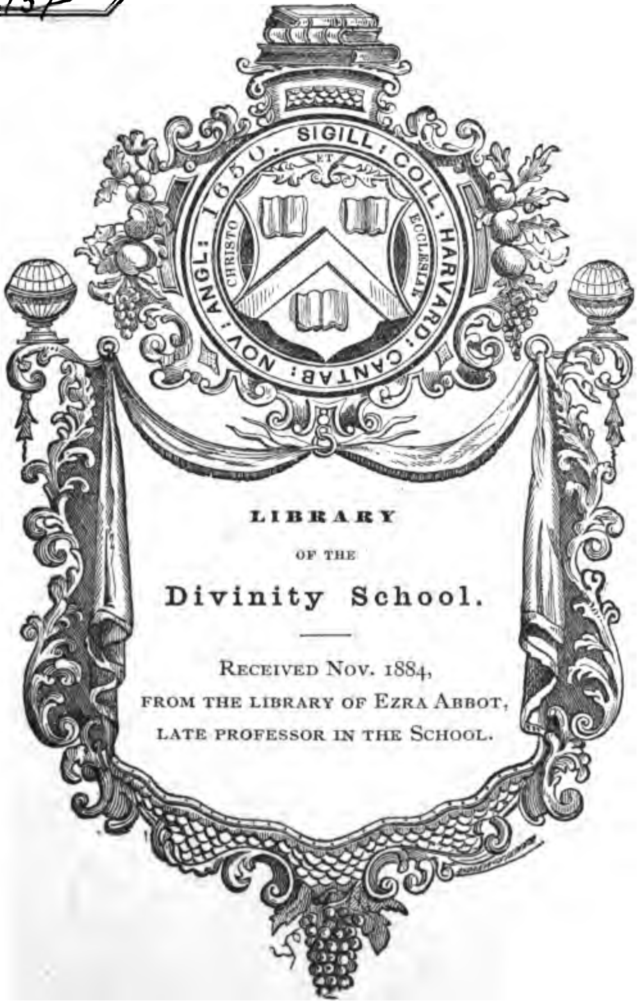
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LECTURES

ON THE

ATHEISTIC CONTROVERSY;

DELIVERED IN THE

MONTHS OF FEBRUARY AND MARCH, 1834,

AT SION CHAPEL, BRADFORD, YORKSHIRE.

FORMING THE FIRST PART

OF

A COURSE OF LECTURES ON INFIDELITY.

Benjamin

BY THE REV. B. GODWIN:

WITH ADDITIONS BY W. S. ANDREWS.

"Having no hope, and without God, in the world."

FIRST AMERICAN, FROM THE LONDON EDITION.

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TO THE

CHURCH AND CONGREGATION

ASSEMBLING IN SION CHAPEL, BRIDGE-STREET,

BRADFORD,

THESE LECTURES,

WHICH ARE PUBLISHED AT THEIR ESPECIAL REQUEST,

ARE WITH AFFECTIONATE REGARD INSCRIBED,

BY THEIR SINCERE FRIEND

AND DEVOTED PASTOR,

B. GODWIN.

PREFACE

TO THE AMERICAN EDITION.

In presenting to the American people a republication of this work, I consider myself as performing one of the most agreeable acts of my life, and one which I trust will be productive of the most beneficial influence upon the religion and welfare of the community. The publication with me was entirely accidental. I saw a copy of it in the Boston Atheneum, presented by Dr. Sharp, who had received it from one of his friends in England, a member of Dr. Godwin's society. Struck by the title, I was induced to read it, and was so higly gratified by the masterly ability with which the author has handled the subject, that I immediately applied to Dr. Sharp for his consent to a republication of it here, who very politely furnished me with a copy for this purpose;—and also expressed his very high opinion of its merits, and his strong desire for its republication.

At the present time, when such systematic and strenuous efforts are made, as well in this country as in Europe, to unsettle the public mind upon the great and fundamental doctrines of religion, and produce a state of the most thorough and cheerless scepticism in their place, it seems to me the appearance of such a work is extremely seasonable. The character of it in every respect is such as the Christian, the philosopher, the scholar, and the man of taste could desire. It presents the most powerful, logical, and convincing train of reasoning to the reader, clothed in the most lucid, harmonious, and engaging style—and whether regarded in its matter, or its manner, it may, I think, be said, with justice, to be as able a publication as ever came from the press. As a mere piece of composition, it is beautiful—as a connected chain of reasoning, it is overpowering and irresistible. The temper manifested in it, too, is highly creditable to the author, and grateful to the reader. The most perfect candor, calmness, and, I may say, amiability prevails throughout it;—a spirit of sincerity and benevolence, which seems only intent upon the discharge of a great duty, and promoting the temporal and eternal welfare of his fellow-beings. The prejudices of his sceptical brethren are alluded to with great delicacy, and they are treated as men who have embraced wrong opinions, not from a perversity of the heart, but from the fallacy of the head.

The first lecture consists of a course of reasoning which is rather abstruse, and requires a greater effort of the mind for its comprehension than all readers are either able or willing to bestow. But the remaining five lectures are very popular and intelligible in their character, and consist chiefly of illustrations drawn from astronomy, anatomy, chemistry, and the other physical sciences. These illustrations are, many of them, original and beautiful, and delight at the same time that they convince.

The work is prepared in a manner so systematic and scientific, that it is well calculated for a class-book for the oldest class in Sunday schools—and also for colleges and theological institutions. To be read and admired, it is necessary only that it should be known—and the friends of religion and the improvement of mankind cannot render them a better service, than by giving it notoriety and a general circulation.

A short addition is made by me, to the work, containing a course of reasoning, which had occurred to my mind, somewhat different from the author's, in support of the existence of a God. Though this may not be needed, it may be useful, as coming in confirmation of his own, and as shewing how different minds, who are in pursuit of truth, may arrive at the same conclusion, by a process not altogether similar. With these remarks, I commit the work to the kindness of the public, happy in being the almoner of another's bounty, and trusting they will receive the same gratification and instruction from its perusal which I have obtained. W. S. A.

PREFACE.

The subject of these Lectures is confessedly of the first importance, and deserves the most serious and general attention; it constitutes the foundation of all religious truth, and has, therefore, not only occupied the minds, but employed the pens of the most profound philosophers, and the ablest divines. Till within a few months, nothing was farther from the author's thoughts, than to add another to the many volumes which have been written on this supremely interesting topic. The circumstances in which this work originated, and which seemed scarcely to leave an alternative, must be his apology—if any apology be deemed necessary—for its publication. Something more than twelve years ago, Providence directed the author's steps to one of the most populous manufacturing districts of this kingdom; he soon observed, that the character of the population, in general, was marked by no small degree of activity, and energy, and enterprise, extending to every subject which engaged their attention; that they seldom remained indifferent spectators, or silent observers of what was passing around them, but on all questions of trade, politics, or religion, they generally took a decided part, and, whether right or wrong, pursued their object with determination and spirit. While, therefore, he beheld with satisfaction the vigorous efforts which were made to support most of the benevolent institutions which distinguish the present day, he saw with deep regret, vice assuming a great degree of boldness, and perceived, that a daring spirit of infidelity had, to a considerable extent, not only rejected the truths of revelation, but even denied or questioned the being of a God. He found, that besides regular meetings for discussing the favorite topics of scepticism, many works of infidelity were in circulation, and that the opportunities afforded for the inculcation of its tenets, by the frequent intercourse to which manufacturing employments give rise, were by no means lost. He frequently wished, that some one qualified for the undertaking would step forward in the cause of truth, and endeavor, by a reference to nature, and an appeal to reason, to stop the progress of errors so pernicious. To one or two friends of scientific attainments, a plan of this kind was suggested, but in vain; while the pressure of the author's engagements, and the sense of the importance of such an undertaking, deterred him from making the attempt, though it still continued to occupy his thoughts.

Towards the close of 1833, the following placard was posted on the walls of the town, and neighborhood:

"On Sunday last, in the Primitive Methodist Chapel, Mr. Matfin, according to previous announcement, repeated a declamation on INFIDELITY, which he had before delivered in the surrounding villages. Its character was therefore known, and, prior to its repetition, last Sunday evening, he received a letter, of which the following is a copy:

"'SIR,—As you have taken advantage of the protection of the pulpit to misrepresent and abuse a certain portion of your fellow-creatures, whose only peculiarity is a devotedness to truth, a refusal to profess opinions, which appear to them erroneous and absurd, though the reward of their honesty be the persecutions of interested hypocrisy on the one hand, and of prejudice, bigotry, and superstition, on the other;—as you have described such as enemies to human happiness, and fit only to be hunted from society, common justice requires, that while you thus endeavor to commit them to the antipathies of your hearers, you should allow them to be heard in their own defence. You are, therefore, requested either to permit a reply at the termination of your sermon, or otherwise offer the use of your chapel for that purpose, some evening of the ensuing week. You have described infidels as the most vicious and detestable beings in nature; but if you refuse them the common justice here demanded, your conduct will belie your words, and will prove you to be much more vicious and detestable.

"'Bradford, November 15th, 1833.'

"At the conclusion of the sermon, and while the collection was progressing, Mr. M. stated, that he had received a very ridiculous letter from the infidels, but he must tell them, that 'if any one attempted to read any thing, or speak, or kick up a dust,' they would subject themselves to a penalty of forty-one pounds, and that officers were in attendance to mark them out, in order that the law might be enforced.

"Here is a pretty specimen of the liberality of parsons! They will *only* assert the truth of Christianity where their dogmas cannot be gainsayed! If, however, they be sincere in their declaration, that such a doom, as they assert, awaits those who differ from them in opinion and belief, is it not then their duty to hear, and answer the reasons assigned for such difference? They must know, that belief is not dependent on the will—it is the result of perception, and that, therefore, declamation against, and vituperation of infidelity, are quite useless. Persuasion or threatenings can be of no avail to alter opinions and belief honestly entertained;—all such changes must be the result of conviction from reflection, reasoning, and argument. They should establish the truth of their creed, by exhibiting the force of its evidence, and the futility of all objections. Let any one, competent to this task, undertake it, and he may obtain the co-operation of the sceptic for the eliciting of the truth.

"Bradford, November 22d, 1833."

On reading the above, the author at once felt that such an appeal should be met; and as he found that no one else was likely to take up the subject, he determined on attempting to "establish the truth" of what is generally believed, "by exhibiting the force of its evidence, and the futility of all objections." As soon as his intentions were known, those who had espoused the sentiments alluded to, professed themselves highly pleased, and offered to render any assistance to such an investigation. A public meeting for discussion was suggested; but that, on several accounts, was declined, as less eligible than a course of lectures. It was also requested, that permission might be given to those who held sceptical opinions, to reply, in the chapel, to the arguments which might be advanced; but this was not admissible. The author, however, went as far as he could with propriety; he promised them a syllabus of the lectures, and offered, when they should fix on a time and place for replying, to announce the appointment from the pulpit, and with his friends to hear what should be advanced by them; and, farther, that if they should prove any statement of importance to be incorrect, or any material argument unsound, he would willingly acknowledge it. The difficulty of obtaining a suitable place was finally alleged as a reason for abandoning this plan, and the author was urged to commit his lectures to the press, that they might thus receive an answer. So urgent, indeed, was the request, that a deputation from the body, offered to print the lectures at their own expense, if they should be furnished with the manuscript. As to publishing, no decided reply could then be given; but they were promised, at all events, copious notes.

In February and March the lectures were delivered in Sion Chapel, where the author officiates as pastor. The interest felt in the town and neighborhood was far greater than the lecturer had anticipated. The place was crowded to excess; the congregation increasing as the course proceeded, and though the pressure and heat were great, a silent and unremitting attention was given to the whole of the lectures, which occupied, on an average, each, about two hours and a quarter in delivery. Those who had embraced the tenets of infidelity, were general and regular in their attendance, and their behavior was marked with propriety. Indeed, it is but just to say, that in all the communications the author has had with the leaders of the sceptical party, he has been treated with the utmost respect and courtesy. In his intercourse with them he has often expressed his deep concern for their welfare, and his sense of the pernicious nature of their principles, which they have uniformly received with kindness. It is also but just to add, that though the greater part of those who are professedly sceptical, deny, it appears, the existence of a supreme and intelligent

Creator, distinct from nature, they are not, as far as the author can learn, disgraced by licentious habits; many of them he believes to be men of upright conduct, against whom nothing can be alleged but their principles. That such men should embrace a system so contrary to the general sense of mankind, so opposed to the conclusions of most of the wisest and best of men; a system so extravagant in its opinions, so barren of all that is good, so unfavorable in its aspect on virtue, is a cause of surprise and regret. May "the Father of lights" mercifully convince them of their error—may they "know the truth," and may the truth "make them free."

In addition to the frequent and urgent requests of the followers of infidelity, and the great difficulty found in furnishing, according to promise, such notes as would answer the purpose, a unanimous and affectionate request came from the author's own beloved charge, that the lectures might be published,—he could hesitate no longer.

In consequence of these circumstances, they now appear before the public. The local interest cannot, of course, be expected to be widely extended, but the author could not well print for some, without publishing for all. It was felt to be a disadvantage that so many had written, and ably written on the same subject, but none have written precisely in the same way; and besides, many will probably read these lectures, who have not time, or opportunity, or inclination to read other works. It was difficult to keep clear of the ground which others had occupied; but it is presumed, that no candid and judicious critic will suppose that complete originality was either practicable or desirable. The author has, of course, read on the subject, but he has thought for himself; and, as it has, no doubt, happened to others, trains of thought, which to him were original, he has often found, subsequently, in writers already before the public. He has deemed it right to avail himself of all the information which was accessible to him, that bears upon the subject: he has often quoted, but never, he believes, copied. While the author was preparing the lectures, a work was put into his hands, published a few years since, by a highly respectable and talented minister of the Methodist New Connection, on the same subjcet;* but, as the author found on inspection, that this gentleman referred principally to the work whose atheistic tenets he also intended to examine, he laid it aside without a perusal, lest he should be in the dilemma of either appearing to copy him, or of giving up ground which might be advantageously occupied. Perhaps this was being unnecessarily fastidious, but the author felt it the only way in which he could comfortably proceed. As yet, he has not had the pleasure of a perusal of this work; now he will be able to enjoy it.

A considerable degree of surprise has been expressed at the delay in the publication of these lectures. The author is well aware that the sale of the work will suffer from it, as much of the deep interest felt at the time when the lectures were delivered, must have subsided; yet, it was unavoidable, and he begs his friends to accept the following reasons as an apology. For nearly two months after the delivery of the lectures, the author was from home; one month, or nearly so, on business connected with the institution of which he was a tutor, and a few weeks afterwards on account of ill health. As the lectures, before their delivery, though pretty fully written, were not in a condition to meet any other eye than that of their author, it was necessary that they should be en-

* The Rev. T. Allin.

tirely re-written. In addition to this, every argument has been re-examined, authorities re-consulted, and quotations verified. The interruptions also, from official duties, corrections and revisions of the press, &c., have not been few. It would have been much more satisfactory to the author's own mind, if he could have had yet a few months more to revise the whole; but the continued demand for the appearance of the work rendered expedition desirable. He wished to place the subject in the most convincing form, before the minds of those whose welfare he has more particularly sought; and deeply would he regret if he should fail in his object, through incapacity to do justice to so important a subject. In pursuing so many trains of thought, in introducing proofs and illustrations of so varied a kind, in touching on so many points of a difficult and delicate nature, in so many disquisitions of an abstract and metaphysical kind, it would be strange indeed, if both friends and opponents should not find something to which they might object; but for all that is material in the great argument, the author has no fear. He by no means deprecates the honorable criticism of friends, nor wishes to escape the most searching investigations of the unbeliever. He has no doubt but the practised eye will discover marks of haste; he hopes, however, that the inaccuracies will be few, and not important. The lectures are substantially the same in matter and method as they were delivered; they could not possibly be the same verbatim, as many of the most affecting appeals, as well as several of the illustrations, had no place in the previous notes. The style of address is preserved as nearly as possible; but the author must confess, that in preparing the lectures for the press, much of the spirit that attended their delivery, seems to have escaped; to write in the study, and to speak to a crowded audience, whose attention is evidently and deeply excited, are very different things.

No sooner was the intended publication of the lectures announced, than public information was given that they would receive a reply. Nor will the reply, it is believed, be long delayed; as, at the particular request of the sceptical party, the author has furnished them with the sheets as each lecture passed through the press. He has also to acknowledge, on their part, the readiness with which they furnished the author with works which advocated their sentiments, which were not in his own library. The arguments combatted, are principally, though not entirely, taken from 'The System of Nature,' a work which bears the name of Mirabaud, though it was probably written by some other person or persons.* The principal objections in Mr. Hume's 'Dialogues on Natural Religion,' are also noticed, together with the arguments, or objections of some others. The reason why the preference was given to 'The System of Nature,' was, that besides its containing a more full and complete exhibition of the atheistic philosophy, than any one work with which the author is acquainted, and its being less grossly offensive in its language than most, it is considerably read in his neighborhood, and appeals are often made to it. With other works of a similar tendency, it is published in cheap numbers for more general circulation,

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* The author could not procure a copy of the 'System of Nature' in French, or he certainly would have consulted it; but as it is the English copy which is circulated and read in his neighborhood, the references to this are more convenient. The edition is the third, octavo, in two volumes. The other works of a sceptical kind quoted, with the exception of Mr. Hume, are from 'The Deist,' a work which boldly advocates atheistical principles, published by Mr. Carlisle.

That his townsmen, who intend to animadvert on these lectures, will treat him with courtesy, the author has no reason to fear; but he earnestly entreats them to combat not for victory, but for truth: he affectionately and solemnly begs them, and others inclined to sceptical principles, who may read these lectures, to give them a serious and candid perusal, and in the calmness of retirement, and the coolness of reflection, to inquire "what is truth?" Whether the author will feel it is duty to take any public notice of the intended reply, will depend on its character; he has no time for needless controversy, or trifling logomachy, while he would not shrink from properly conducted discussion, which has important truth for its object.

It is hoped that the lectures now introduced to the public, may not be useless to those, who, from their connections or circumstances, are exposed to the attacks of infidelity, or the seductions of "a vain philosophy;" especially those whose youthful and ardent minds may be more liable to danger. Very thankful would the author be, should they be the means either of prevention or cure.

It was the author's intention to follow up the present course, by another on the Christian Revelation; but what he has already done, has occupied so much time, and caused the suspension of so many duties, that, if he should deem it requisite to resume the subject, some time must elapse before he returns to it. In the mean time, he earnestly implores the Divine blessing on this attempt.

Bowling Cottage, Bradford, Yorkshire,
Oct. 31st, 1834.

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LECTURE I.

PRELIMINARY REMARKS—THE ARGUMENTS STATED—PRESUMPTIVE PROOFS.

PSALM C. 3.—"KNOW YE THAT THE LORD HE IS GOD; IT IS HE THAT HATH MADE US, AND NOT WE OURSELVES; WE ARE HIS PEOPLE, AND THE SHEEP OF HIS PASTURE."

IT seems to be a law of our nature, given for the most beneficial purposes, that we should ever be desirous of communicating our sentiments and opinions to others. A most important result of this is the increase of knowledge, and the general improvement of society. Were each to confine to his own bosom the amount of his observation and experience, knowledge could never accumulate, science could not be extended, and one of the most important advantages of man's social condition would be lost. But this cannot be; we are so constituted that an inward impulse is ever operating, to produce a communication of our thoughts and feelings. Circumstances may, indeed, exist, which may greatly modify this propensity; but, generally speaking, the greater the importance which we attach to any subject, and the deeper the interest which we feel in it, the stronger is the desire to engage the attention of others to it. When, in addition to this, we have a conviction that the welfare of others is essentially connected with the adoption of our own views, every benevolent feeling of the heart adds its weight to the motives which induce us to impart these sentiments to others. It is no wonder, then, that the operation of religion on the mind should powerfully act on this law of our nature, as nothing can equal the solemnity of its truths, the grandeur of its objects, and the influence which it has on the happiness of man, both here and hereafter. The existence of God, in his glorious perfections, as the creator and governor of the universe, is the foundation of all religious truth. It is this which, deeply impressing the mind of the Psalmist, produced the language which I have just read as the ground of our discourse. While he devoutly admires the greatness and the goodness of the everliving God, he calls on all to acknowledge his supremacy, and to render to him "the glory due unto his name." "Know ye that the Lord he is God; it is he that hath made us, and not we ourselves; we are the people of his hand, and the sheep of his pasture."

Jehovah, usually translated Lord, is a name given to the Supreme Being by the sacred writers of the Old Testament; it is derived from a root which signifies existence, and denotes *the existing one* by way of distinction and emphasis, the one who has existence in a sense peculiar to himself and superior to all other beings. This awful power, of underived and unchanging existence, is GOD; who is the first cause, the sole proprietor, and the supreme governor of all. "It is he that hath made us, and not we ourselves;" we are therefore subject to his control, and dependent on his bounty, "we are the people of his hand, and the sheep of his pasture." These are the views which the devout Psalmist takes of the great Jehovah; these are the sentiments which he is desirous of impressing on the minds of others; and this is the all-important theme on which, with all humility and becoming solemnity, I would now enter.

As few, if any, in our congregations, deny or doubt the existence of the Deity, it is very rare that any proof is advanced from the pulpit on the subject, or that it is treated in an argumentative way. It seems unnecessary to prove what all admit, or to adduce evidence of what is commonly received with the certainty of an axiom. But there may be circumstances which may require the exposition and defence of the most undoubted principles; and such, I am compelled to believe, is the case now. When all that we hold sacred is contemned; when all the objects of our belief are attacked, and our dearest hopes are treated as visionary and delusive;

and when, at the same time, those who throw down the gauntlet, and bid defiance to every thing which bears the name of religion, declare that their "only peculiarity is a devotedness to truth," it is high time to show the Christian that his hopes are not mere fancies, nor his faith a "cunningly devised fable," and to meet the challenge of the professed inquirers after truth with such evidence as we hope will satisfy them, — as we believe must satisfy every honest and unprejudiced mind. My intention is, therefore, if health and strength permit, to follow up the present course with a series of lectures on the truth of divine revelation; but as a revelation necessarily supposes the existence of a Supreme Being, we shall, at present, confine ourselves to this great fundamental article of all religious belief.

To be engaged in the pursuit of truth, is an employment so congenial to the mind of man, and the acquisition of truth is so valuable to a rational being, that he who makes no endeavor after the attainment, acts a part unworthy of the rank which he holds in the scale of being. "Buy the truth and sell it not," is at once the dictate of reason, and the injunction of revelation. All truths are not, however, of equal consequence; there are innumerable points on which information would be of no conceivable importance: in many cases, the only advantage of knowledge is the pleasure which it affords by satisfying a rational curiosity, or the tendency which it has to enlarge and strengthen the mind. But the existence or non-existence of a Supreme Being, who, as the maker, the proprietor, and governor of all things, is at the head of the universe, is a point which is of unspeakable importance to our present happiness and our future welfare. This is not a question of temporary loss or gain, of mere comfort or uneasiness, the resolution of which may be disregarded without fear of any serious injury; but it is an inquiry which involves all that is dear to man, all that is important to man, through all the extent of his relations and the whole duration of his existence. It is, whether there is a being who pervades all space, who surveys all nature, who governs all creatures; who has unlimited power to save or to destroy; who is the perfection of all goodness, the pattern of all excellence, the protector of virtue, the avenger of the oppressed, the refuge of the needy, and the punisher of all vice; who will in another world crown all the exertions and reward all the sufferings of humble piety with unspeakable felicity, and render unto the wicked according to their works; or, whether all this is but a fiction of the imagination, the invention of cunning and designing men, a false, absurd, and irrational superstition, from which it is one of the highest efforts of wisdom and benevolence to attempt to deliver the human mind. All that excites the hopes and fears, the anxieties and solicitudes of our minds, in relation to this world, is nothing — absolutely nothing, when compared to what is involved in this great question:—Is there a supreme and gracious power, in whose mercy I may hope, when conscious of a thousand imperfections, in whose compassion I may find a refuge amidst all my sorrows and my griefs, in whom I may trust when earthly help fails, and who is able, after the changes of a brief mortal existence, to give to my soul that enlarged happiness after which I pant, of which I feel my nature is capable, and which will be an ample indemnification for all the sufferings of this probationary state! — or, is there no hope for the distressed beyond his own resources — is there no help for him when earthly good forsakes him — is all above him and beyond him a cheerless blank, or a dark and impenetrable cloud? Is there a being whose will is law to the universe, who, "glorious in holiness," is "angry with the wicked every day," who sees all the recesses of the guilty heart, knows all the misdeeds of the transgressor, whose omnipotent power can crush the haughtiest sinner in the dust, who will call all to an account for "the deeds done in the body," and not allow vice, however sheltered by rank or veiled in obscurity, to go unpunished? — Or, is there no law superior to man's desires, no omniscient eye to look on the deeds of darkness, no divine power to fear, no accountability to be concerned for; has the guilty wretch, whose life has been a scene of criminal indulgence, of perfidy and cruelty to others, a torment and a curse to society, no more reason to fear than the tiger of the desert, which, having lived on blood and rapine, a terror to every inferior beast, crawls into his den, breathes out his life, and becomes nothing more than a putrid lump of various elements, hastening to mingle with the earth which was the scene of all his cruelties? Such is the nature of the inquiry on which we now enter; and what can equal the importance of this subject? All the facts of history, all the discoveries of science, all the concerns of life, sink into utter insignificance, when brought into comparison with it.

At all times, and in all circumstances, the great theme which is now to engage our attention is, and ought to be, deeply interesting, both to those who believe, and to those who doubt; but there are reasons, peculiar to the present time and circumstances, which induce me to think that an examination of this all-important subject is now particularly seasonable.

By the extension of education, by the wide diffusion of knowledge, and the great facilities which exist for the communication of ideas and opinions on all subjects, the thinking faculty has received a most astonishing impulse, and the spirit of inquiry has gone forth through all the length and breadth of the land. Every thing now must be subject to a scrutiny. Opinions which have been held sacred for ages, institutions of remote antiquity, political relations, civic economy, ecclesiastical polity, all are now brought to the test of inquiry. In such a state of things it is no matter of surprise, that not only the peculiar doctrines and varying forms of the several sects should be regarded as questionable, but that ample proof should be demanded of those truths on which, as its basis, all religion rests. It is necessary, then, to show that those sacred principles which sustain the hopes and cheer the spirit of man, which exert a salutary influence over his life, and support him in the hour of death, are founded in reason; that they have not only the stamp of antiquity but the seal of truth;—that, far from shunning the light, they solicit inquiry, and have nothing to fear from the closest and most impartial examination.

The increased activity of the abettors of scepticism is also a circumstance which deserves attention. As might be expected, they have availed themselves of the facilities which the wide diffusion of knowledge has afforded, to disseminate their tenets. And, unhappily, the prosecutions of the late government have given a notoriety to the apostles of infidelity, which, otherwise, they never could have obtained; and have even, in the minds of many, there is great reason to think, created a degree of interest, and led them to suppose that there must be some truth in that for which men appeared so willing to suffer: this has probably assisted the efforts of those who are laboring, with no small zeal, to propagate their own hostility to everything which others regard as sacred. And though many who rail at religion are capable of showing nothing but their hatred of all that is holy, scarcely knowing "what they say, nor whereof they affirm," there are, it must be acknowledged, men of ingenuity and talent, who rank among the opponents of Christianity, who, by their writings, supply others with the weapons of their warfare. Now, many of our young people, and others who have not had much opportunity of reading, meet with persons and works of this description; they are assailed at once by the ingenuity of argument and the boldness of assertion, and if they have no means of reply, will they not be, not only staggered, but led, perhaps, to conclude, that what is so plausible must be true, that what is so strongly affirmed, must have some evidence for its support. It seems necessary, therefore, that an antidote should be provided, that those who are thus assailed should be able "to give a reason of the hope that is within them," that they should be able to detect the error of a profane sophistry, and to see that the cause of holiness is the cause of truth.

Nor must it be concealed that the disciples of infidelity have latterly been considerably increasing in number. I do no wonder at it. Why should we be surprised that, while so many have a thorough dislike to all that is pious and spiritual, some should be found who openly say, "let us break their bonds asunder, and cast away their cords from us;"—that speculative minds, who see no beauty in religion, as freedom of opinion prevails, should throw off both the form and the name of Christianity? I do expect that the number of such will still increase, and that the cause of infidelity will receive farther accessions, not from the ranks of piety, but from a nominal Christianity, and a concealed scepticism.* I see no reason for any fear in the prospect of such a result; nor does it appear to me as a gloomy and portentous "sign of the times." If the great struggle should at last be between Christianity and infidelity, what has truth to fear? It is, however, a call to the friends of religion to furbish their weapons, and be found at their post.

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* That there is already much more infidelity than is apparent, no one doubts, who has a general acquaintance with the present state of society. Should the course of events be such, as by any means to allow of an unrestrained expression of sceptical opinions, without the fear of incurring odium, or suffering inconvenience of some kind or other, many who now in private life are hostile to religion, would become its avowed opponents. There

Another consideration, of no small weight, is, that in our own town and neighborhood, which have the most direct claims on our efforts in the cause of truth and holiness, there are many who openly avow the principles of infidelity, and are active in disseminating them. These have publicly called for evidence to establish the truth of religion, have blamed the ministers of Christianity for not reasoning with them, and have declared their willingness to listen to any arguments which may be advanced in its favor. And should such calls be disregarded? Should errors, however revolting to our minds, render us indifferent to the welfare of so many of our fellow-creatures, of our fellow-townsmen? In such circumstances, I hope it will not be deemed presumption, that I come forward to plead what I believe to be the sacred cause of truth, to perform what ought to be considered, in the highest sense, a work of mercy. "Brethren, if any of you do err from the truth, and one convert him, let him know that he who converteth the sinner from the error of his way shall save a soul from

are always some who are daring enough to avow their hostility to generally received, and long revered opinions, at any risk; but where there is no high principle to support the mind, prudential motives will generally prevail.

death, and hide a multitude of sins." I do entertain the humble hope, I do feel the strong desire that I may be able, through the blessing of God, so to place the truth before the minds of such, as to show the unreasonableness of their scepticism, lead them from the paths of error, and guide their feet into "the way of peace." And if this great object be realized in any one instance, I shall not only feel amply repaid for all my labor, but shall have abundant reason to rejoice, and to praise him who is the giver of "every good gift and every perfect gift."

Let me, then, bespeak a candid interpretation, from my Christian friends, of the method which I shall pursue. Let them be neither surprised nor dismayed, if I appear to state hypothetically what they have long taken for granted as undeniable and important truth. Let them remember that the placing of any position as a question, in order to try the force of the argument which affirms or denies it, is never understood to imply any doubt or uncertainty in the mind of him who thus states it, much less any endeavor to induce others to doubt. No argument can well be conducted without such suppositions. Nor let any, who revere the authority of scripture as decisive in all questions of morality and religion, wonder that it is not quoted in proof of what I advance. If those to whom I intend particularly to address myself received the inspired writings as authority, there would be no need of any reasoning; but as they do not believe the scriptures, a reference to them will answer no purpose. My Christian friends will bear with me, then, if I attempt to prove at some length what they fully believe; and if I do not give prominency to those truths of the gospel which are "the life of their spirits," let them remember that the benefit of others must be sought as well as their edification; it is not so much to the disciple of Christ as to the unbeliever and the doubting inquirer, that I shall now address myself.

To those of my congregation who have joined the ranks of infidelity, I would say, Give me your most serious attention. The subject is one which, you cannot but admit, is of paramount importance. If you are in error as to the existence and character of God and your relations to him, it is an error of no trifling kind, its magnitude is awful, and its consequences alarming. Let me intreat you, therefore, to banish from your minds everything like levity, to hear as those who are listening to a topic in which their best interests are involved, and to judge as reasonable men.

Let me also request your candid attention. If you have any acquaintance with human nature, you must be aware of the tendency of prejudice to mislead the judgment. You may have seen much under the Christian name adapted to give very unfavorable impressions of Christianity; but if the appearance of hypocrisy has disgusted you, do not, on this account, come to the sweeping conclusion that there is no sincerity. If you have seen, in living instances, or in the page of history, religion made subservient to mere worldly ends, a means of gratifying ambition, of acquiring wealth or power, beware of the unfairness of attributing to it the abuses of wicked men; and ask whether such conduct is not branded with infamy, and such characters regarded with disdain, by that religion which is thus insulted and dishonored. If, again, you feel hostile to religion, from an aversion to the restraints which it would impose on you, or the sacrifices which it would require of you, endeavor, while hearing, to divest yourself of this prejudice, and inquire only, — Is it true?

Allow me also to suggest a caution. Do not hastily reject the whole of the statements or reasonings which will be presented to you, if you deem some particular part to be unsound. It would be doing yourselves a serious injury, if, because in a great variety of proofs and illustrations, you can single out some that appear unconvincing or irrelevant, you on that account refuse to admit the general body of evidence adduced. It is but just to me, to the subject, and to yourselves, to judge by the whole amount of proof, and not by any insulated part.

On such an occasion, I should deem it a useless and injurious fastidiousness to affect originality. The inquiry should be, not what is original, but what is true? However great the similarity may be in substance, yet every one has his own way of stating a fact or conducting an argument, and, sometimes, what appears unconvincing in one point of view, when exhibited in another light, or in a different manner, succeeds in producing conviction.

I beg also to state, that while I cannot but consider infidelity to be an error of a most pernicious kind, I hold it right, in arguing with those who have embraced it, to avoid all harsh and irritating expressions, and to treat them as rational beings. Were I to do otherwise, I should act contrary to the spirit of that holy religion of which I am an humble advocate, which is itself "a reasonable service," and which commands us "in meekness to instruct those who are out of the way;" — I should act contrary to the object I have in view, sensible as I am that no man is ever converted by abuse, or enlightened by irritation; — and, I may add, I should act contrary to the feelings which have given rise to these lectures, as I trust I can appeal to the "searcher of hearts," for the benevolent, the affectionate concern, which I entertain for the welfare of those whose attention I have especially solicited to these lectures, and who, whatever may be their mistakes, have still, as our fellow-creatures and our neighbors, strong claims on our sympathy and our kindness.

But if I speak mildly and cautiously, I must not be understood as thinking lightly of the error which I am combating. Fidelity to the office which I sustain, as well as concern for the best interests of those whom I address, oblige me to state that I consider it as a moral poison, which must work the most serious mischiefs; —that I view those who embrace it as being in imminent danger, in a state of actual rebellion against the Most High; and "fighting against God;" — that, in a word, they are pursuing a course which, if persisted in, must terminate in everlasting ruin. And it is because I believe this, that I am affectionately concerned to gain their attention, and to lead their minds into the way of truth and peace.

My respected hearers will, I trust, excuse the length to which these prefatory observations have extended; I thought it right that we should have a clear understanding of our object, and the manner in which we shall proceed.

Our present controversy is with atheism, the system which denies or questions the being of a God. Atheistic writers, indeed, sometimes speak of a "God," a "divinity," a "cause of causes," but in all these cases they mean the material universe, the properties which it possesses, or, a mere abstraction. But this is a fallacious and deceptive use of terms; at least, whatever be the intention of the writer, it is such an employment of language as tends only to mislead the unwary. Our dispute with atheism is not whether there is, or is not, a universe of matter; but whether there is, or is not, a power distinct from the material system, which, with infinite wisdom, has created all, and governs all. Neither is the controversy whether the operations of nature are performed by general laws, connecting natural causes and effects in a way which may be perceived; but whether these laws are not the arrangements of a superior and presiding power,—whether there is not a cause of all these causes and effects, to which, as the great first cause, all others are to be referred. Consequently, when atheism has proved that all the operations of nature proceed according to general laws, in which we can mostly trace the connexion of cause, and effect — such as the falling of a stone by the power of gravity, and the revolutions of the planets by the centripetal and centrifugal forces — it has proved nothing but what we admit; it has done nothing towards settling the controversy; it has not advanced one single step towards proving that there is no supreme, eternal, and primitive cause of all, himself alone uncreated and independent.

It must also be noticed, in considering the state of the argument between us, that the most successful efforts of atheistic reasoning could only reduce the point in dispute to uncertainty. However bold may be the assertions of the non-existence of an all-creating power, no man can know that there is not such a being; — no man has ever proved, or can prove that there is no God. The farthest point to which the most daring sceptic can go, without exposing himself to the charge of utter ignorance or the most presumptuous rashness, is to affirm that he sees no proof of the existence of a Deity. What atheist, who makes any pretensions to reason, would venture to affirm, that the existence of an eternal being, combining in his nature the attributes of wisdom and power, the cause of all causes, and the source of all existence, is, in the nature of things, impossible? Everything is possible that does not necessarily imply a contradiction. It is not possible that a past event should still be future; that what now exists, should not now exist; that two halves should make more or less than a whole; in each case there is an evident contradiction. But who will dare to affirm that a palpable contradiction is involved in the belief that there is an eternal being; — that all the causes which we now see in operation resulted from one great primitive cause — and that this original and uncaused being possesses the attributes of mind? Does this imply a contradiction so self-evident as to shock the reason of man, as soon as it is announced? Do we not all know and feel that the very contrary is the case? Would it not require all the ingenuity of sophistry to give any show of absurdity or contradiction to it? If, then, the position that there is such a being is not self-contradictory, his existence is not impossible; that is, it is possible. No man, therefore, can be certain of the non-existence of that which is possible, as that would produce the absurdity of its being possible and impossible at the same time. Every atheist is, therefore, bound to admit, in all fairness, that after all his scepticism, there can be a God; that, after all his confidence, he may still be mistaken.

Who will venture to say that nothing is in being, except what he perceives and knows? How many wonderful and powerful agencies in nature have modern discoveries brought to light, the existence of which was never imagined by past ages, and which, if announced to them, might only have excited, in many cases, the smile or the contempt of incredulity. With what unbounded surprise, if not utter disbelief, would a philosopher of Greece or Rome have received the announcement that there is a power in nature, distributed through all its various departments, which is more gentle in its usual course than the falling dew, and more terriffic in its occasional operations than the wildest hurricane; by which the heart beats and the thunder rolls; which can sleep quiescent in a jar, or blaze through the wide canopy of heaven, involving the whole world in one sheet of flame; that without it life could not exist, while it is capable in a moment of rending the solid globe, and shivering to atoms the whole material structure of this world. Our philosopher, in such a case, might have expressed his astonishment, or even his doubts, but ought he to have affirmed that no such power could exist, because he had not yet discovered it? And is it not as unphilosophically daring to affirm that there is not, and cannot be, any power as distinct from the electric fluid as that is from mechanical force, and as superior to it as this mysterious agent is to all human energy; that there may not be, in other words, a power to which no limits can be assigned, which is distinguished by intelligence, to which all other powers act in dependent subordination, and which is distinct from nature only as its author and its source? Have our atheistic philosophers discovered every possible secret of nature, so as to pronounce that she has revealed all she has to disclose? Are they assured that, in no past age, there has been a convincing exhibition of a divine power? — Are they certain that in future ages there never will be? Can they say that, if not within the reach of their own observation, the boundless range of nature supplies, in no part of the universe, such proof? Yet, such is the universal knowledge assumed by those who affirm "there is no God!"*

Whether, then, we can or cannot prove that there is a God, it is certain that atheism cannot prove that there is no God. Its advocates may deny what we consider certain, but they have nothing on this point to substitute but doubt; whatever promise of truth it may make, it can guide us only to the regions of uncertainty. I beg those who are sometimes staggered by the tone of confidence which infidelity assumes, to remember this. And I intreat those who have said, either in their hearts, or with their lips, "there is no God," considering the acknowledged uncertainty in which all their speculations must still leave the great point in dispute, to attend with the utmost seriousness and concern to the following presumptive arguments, which lie against the atheistic scheme.

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* Concessions of extreme uncertainty as to the origin of the universe, and, consequently, as to their favorite position, that it had no Creator, are frequently made by the most determined opposers of the existence of a Deity. Mirabaud, or the author of the 'System of Nature,' which bears his name, who treats the idea of a Creator as a "chimera," a "fancy," &c. and, with much ingenious sophistry, endeavors to prove that an all-creating intelligence is a thing impossible and absurd, thus writes: "If it be inquired how or for why matter exists; we answer *we know not.*"—Vol. I. p. 96. "But it will be asked, and not a little triumphantly, from whence did she (nature) receive her motion. Our reply is, *we know not*, neither do they; that *we never shall*, that they never will. It is *a secret hidden from us*, concealed from them by the most impenetrable veil."—Vol. I. p. 41. "In supposing it (matter) to be created or produced by a being distinguished from it, or less known than itself, *which it may be, for anything that we know to the contrary!*"—Vol. I. p. 96.

First: The general belief, in all ages, and in all countries, of the existence of a Deity, is unaccountable on the principles of atheism, and is a presumption that it is not founded in truth. That such has been the general belief, none, I presume, will be found to deny. This was the case with all the ancient nations, with the Indians, the Egyptians, the Assyrians, the Persians, the Greeks, and the Romans; with the hordes of Northern barbarians which inundated the Roman empire, and which finally amalgamated with the nations of Europe; and with all the tribes of the New World, in the whole extent of the American continent. This belief in a superior power has, indeed, as might be expected by any one acquainted with human nature, been greatly modified by existing circumstances, according to the degree which civilization prevailed, and the temper and genius of the people. The mythology of the Greeks was full of poetry; that of our Saxon ancestors was fierce and warlike. A refined people gave a polish to their religious system; and barbarous nations attributed to their divinities much of their own grossness. Hence there is but little weight in the objection which is sometimes made, that the gods of these nations were multiplied, were absurd, gross and vicious. The idea of a divine being having gained possession of the mind, it was by ignorance, passion, fancy, moulded into strange shapes and uncouth forms. A single object, and that the most regular and perfect, may be multiplied, distorted out of all shape, or broken into apparent fragments, and invested with colors which do not properly belong to it, according to the medium through which it is viewed. This proves nothing against the object; though it is decisive, as to the unfavorable nature of the medium for giving just perceptions of it. Such, we conceive, has been the effect of the very different circumstances in which man has been found, on this idea, which, from the earliest ages, and in every part of the world, has taken possession of his mind.

Now, how is this belief of all ages and all countries to be accounted for? We find it in times and places the most remote; in nations which could not, at least for a long succession of ages, have any communication with each other; as deeply fixed in the minds of the savages of America as in those of the European continent, or of the ancient Orientals. Admit the position that there is a divine Creator, such as the Bible speaks of, and all the phenomena are at once explained. It is scarcely possible to suppose that a wise and beneficent being should have formed such a creature as man, and left him wholly ignorant of his origin. The knowledge of his Maker must have been preserved for some ages after man's creation; but as the human race became depraved, and, in distributing themselves over the face of the earth, degenerated into ignorance and barbarism, or, in their refinement, indulged in the wantonness of speculation and of fancy, the simple and original idea of a Supreme Being was multiplied and distorted into all the grossness of idolatry, and all the poetic fictions of mythology.

But, on the atheistic hypothesis, how is this to be explained? If it be supposed that the idea was handed down by tradition from father to son, from time immemorial, still the question arises, how did the tradition originate? If it be an idea so chimerical and repugnant to reason as the advocates of this philosophy would have us to believe, how came it to be as early as the annals of man, and as wide as the human race? That such a tradition should arise in a thousand different parts of the globe, and with as many different tribes, or, if it be assigned to a common origin, that it should have found universal acceptance, or nearly so, in every succeeding generation, can only be accounted for, I conceive, on the supposition that it is quite in accordance with the nature of man; and the correspondence of this belief with the sense of mankind, in all circumstances and in all ages, affords a strong presumption of its truth.

Or, if recourse is had, in explanation, to something in the constitution of man's nature which leads him to the conception of such an idea — to a kind of moral instinct which prompts him to recognize and worship a superior power — does not this innate propensity accord with the supposition of the existence of a Creator, who, for wise and benevolent purposes, wrought the feeling into the very texture of his nature, rather than with that which supposes it to be a universal fallacy, leading to no good, but producing debasement and misery.*

Or, if the belief be referred to reason, and it be supposed an error of the judgment, is it not a most inexplicable and unparalleled phenomenon, that nearly all men, in all times and places, should, without any common consent, have fallen into a similar error?

The author of the 'System of Nature' endeavors to obviate the difficulty we are noticing, not by denying the fact of universal belief, but by assigning it to causes which he supposes compatible with this system. According to him, its origin is to be traced to the ignorance and fear of man, while in a rude state of barbarism. "It was in the lap of ignorance, in the season of alarm, that mankind ever formed their first notions of the Divinity."† "If the gods of nations had their birth in the bosom of alarm, it was again in that of despair that each individual formed the unknown power, that he made exclusively for himself."* The causes of this terror, either "general or local," are stated to be "physical disasters, dreadful catastrophes," such as "inundations," "conflagrations," and "frightful volcanoes."† And in individual cases, man's "diseases, his troubles, his passions, his inquietude, the painful alterations his frame underwent, without his being able to fathom the true causes." The author just quoted has devoted a whole chapter to an inquiry into "the origin of man's ideas of the Divinity," in which, with many truths which no one questions, there is mixed up a large portion of gratuitous assumption and erroneous statement, the whole of which is pronounced with the boldness of oracular decision. A slight examination, however, will be sufficient to show that the atheistic philosopher has not succeeded in his attempts to account for the general tendency of the human mind to believe in the existence of a superior power.

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* So strong is this innate tendency to acknowledge and worship a superior power, that man has, by some philosophers, been quaintly defined as a "religious animal." And if there really existed no proper object of worship, would not this be a singular exception to all the capabilities and propensities of our nature? For every sense, for every faculty, for every desire or appetite, whether of the mind or body, there is an appropriate object. There are forms and colors for the visual organs, sounds for the ears, food for the cravings of hunger, knowledge to satisfy curiosity, and friends for all our social affections; but, if for this innate propensity, found wherever the human race exists, there were no object,—nothing but a monstrous and injurious fiction,—how strange would be such an anomaly, such a solitary exception in man's nature!

† System of Nature.—Vol. II. p. 14.

That the alarm produced by tempests, volcanic eruptions, earthquakes, and such terrific phenomena, first or principally suggested the notion of a Divinity, is an assertion completely destitute of proof, which, neither a reference to our feelings, nor to the history of the human race, will justify. Such appearances, indeed, strike us with awe, and produce a feeling of human weakness and comparative insignificance; but they are only of rare occurrence. Do not the emotions of wonder, admiration, and gratitude, as involuntarily and far more frequently rise in the mind, when the more constant operations of nature are observed? Do not the sublimities, the beauties, the beneficent arrangements, and the admirable regularity which we see around us, as certainly conduct our minds to the conclusion that infinite wisdom and power preside over universal nature, as any occasional "physical disaster?" The annals of the human race are perfectly in correspondence with this: we find that the first objects of polytheistic idolatry were the sun, the moon, the stars, the powers of nature, and illustrious men; objects of beauty and splendor, or from which benefits had been received or were expected. This our author subsequently admits,* and adds these causes to the "dreadful catastrophes" before mentioned. It was not, then, to "alarm," and "terror," and "despair," that "the first notion of a Divinity" owed its origin, as, in the course of things, many "benefits" must have been received, and much good long enjoyed, before these "catastrophes" and ills could happen. But to whatever origin the idea of a Divinity is to be assigned, our philosopher certainly leaves the question as open and unanswered as ever, — how it was that in the view of what was terrific, or splendid, or regular and useful in nature, nations should universally have agreed to acknowledge a power controlling and directing all its energies. If it be replied that man, beholding the operations of nature, transferred to some invisible being the properties of his own mind,* this is but saying, that perceiving the power of an invisible something within him, and its capability of producing effects to a certain extent on all surrounding objects, he judged that, on a larger scale, some unseen power, analogous, but immensely superior to his own mind, produced those stupendous effects in nature; that, as no orderly disposition, productive of convenience or comfort, in his own little economy, was effected without contrivance, so, to account for all the marvellous exhibitions of arrangement in the course of nature, on which his existence and happiness depended, he concluded that there must be some mighty agency, working with purpose and design. In this way, we admit, men have reasoned,—in this way they still reason; and it is, we believe, a mode of reasoning which all the ingenuity of infidelity will find it difficult to gainsay or resist.

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* System of Nature.—Vol. II. p. 16, 17. † Vot. II. p. 12, 13.

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* System of Nature. — Vol. II. p. 28.

But the author already quoted affirms, that it is man's ignorance of natural causes which leads him thus to feel and reason; all the awe, the admiration, the gratitude which have inspired the human bosom, and prompted the recognition and worship of a superior being, have their rise in ignorance. "In the remote ages of the world," mankind were "savages dispersed, erratic, thinly scattered up and down, (who) knew the course of nature, either very imperfectly, or not at all." "All natural causes were mysterious to our wandering ances tors; the entire of nature was an enigma to them; all its phenomena were marvellous; every event inspired terror to beings who were destitute of experience; almost every thing they saw must have appeared to them strange, unusual, contrary to their idea of the order of things."* To the terror and the wonder resulting from ignorance, every thought which had reference to a Deity is referred. Then the conclusion naturally is, that his knowledge of "physical causes" would as certainly correct the error, and lead him to infer that there is no invisible, superior power. But this is contrary to fact; what mind, not previously disposed to infidelity, ever came to a conclusion against the being of a God, from the knowledge of the wonders of nature's operations? Have not the most original and independent thinkers, those who have been most patient, and sober, and laborious, and successful, in their investigations of nature, been confirmed, by their enlarged views and astonishing discoveries, in the belief of a Supreme Creator of the universe?† And what is there in these new ideas of "natural causes," which contradicts the conclusion to which the mind unacquainted with them has arrived? In what do the philosopher and the uninformed peasant differ in their views of nature? Principally in this, that the one perceives a few more links in the chain than the other, while both are obliged to have recourse to a power which supports the whole. The one may call the thunder the voice of God, that is, the immediate effect of his power; the other traces it to the electric fluid; but when he arrives at this point he finds himself in the same condition as the peasant. Whence this mysterious and generally invisible power, that pervades all nature, and which, even in its most terrific exhibitions, is accomplishing important benefits for man, — who prescribed to it those laws which harmonize it so completely with the system of which it forms a part, — and who guides and controls this mighty, but unconscious agent? He comes to the same conclusion as the other, and is compelled to resolve it, after all his reasonings, into the power and wisdom of a great first cause.

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* System of Nature.—Vol. II. p. 18.

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* System of Nature. — Vol. II. p. 10.

† See a most excellent chapter in Mr. Whewell's Bridgewater Treatise, 'On Inductive Habits; or, on the Impression produced on Men's Minds, by discovering Laws of Nature.' p. 303.

The whole amount, then, of the attempt to account for this general belief, so far from proving anything in favor of atheism, is but a concession that such is the constitution of man, that whatever objects he beholds in nature, awful or glorious, displaying power or beneficent arrangement, his mind is led to the conclusion that they are the works of a wise, good, and powerful being; in other words, that there exists a God.[*]

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[*] In a subsequent chapter of the 'System of Nature,' the attempt is further made to evade the force of this argument. "Are not nearly all the inhabitants of the earth imbued with the idea of magic; in the habit of acknowledging occult powers; given to divination; believers in enchantment; the slaves to omens; supporters of witchcraft; thoroughly persuaded of the existence

I therefore earnestly entreat those who have listened to the dictates of a sceptical philosophy, to consider whether it does not afford a strong presumption against their scheme, that it contradicts human nature; that it is opposed to the general sense of mankind, and has been so in all ages of the world.

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of ghosts? If some of the most enlightened persons are cured of these follies, they still find very zealous partisans in the greater number of mankind, who accredit them with the firmest confidence. It would not, however, be concluded, by men of sound sense, in many instances not by the theologian himself, (!) that, therefore, these chimeras actually have existence, although sanctioned with the credence of the multitude."—Vol. II. p. 154. But there is this important difference between the belief in the existence of a God, and in "witchcraft;" the progress of knowledge detects the fallacies of the one, and confirms the *truth* of the other. "Magic," "occult powers," "divination," have, in our land, long become defunct; "omens" and "witchcraft" are regarded as "old wive's fables," and scarcely "a ghost" is ever heard of, except in the mountains of Wales, or the Highlands of Scotland; and even from these places, their last retreat, they are likely soon to be driven. While the advance of knowledge, instead of dispelling from the mind the idea of a Supreme Being, only sets it in a stronger light; and every new wonder which the extension of science discovers, affords additional proof, not only to the minds of "theologians," but to those of the great majority of "men of sound sense," that there is an all-wise, benevolent, and powerful being, who presides over all nature as its great author. At the same time it is a problem which atheism will find very difficult of solution, how the impression on the mind, of an invisible world, a future state, and the immortality of the soul, became so general as the mistakes alluded to suppose. Again; "Before *Copernicus*, there was no one who did not believe the *Earth* was

To which we may add, as something worthy of remark, and at the same time incapable of contradiction, that at those seasons and in those circumstances when men think most soberly, the conviction of the existence of a Supreme Being, and of their responsibility to him, is most powerfully felt. If this impression existed only in the height of excitement, if its strength were greatest when prejudice and passion had their full sway; if, on the other hand, in seasons of retirement, if, when affliction had sobered down the passions, and the prospect of quitting forever this present scene had abated, if not destroyed, the prejudices of the mind, this belief were generally found to fade or weaken into hesitancy

stationary, that the *Sun* described his annual revolution round it; was, however, this universal consent of man upon a principle of astronomical science, which endured for so many thousand years, less an error on that account."—Vol. II. p. 154, 155. Passing over the inaccuracy of the author as to historical fact, it may again be replied, that further knowledge of nature corrected this error, while increasing knowledge only strengthened the belief of a Supreme Being. But how completely irrelevant is the production of such instances, and how unworthy the name of philosophy! To prove that mankind always felt and reasoned wrongly, evidence is adduced of the imperfection of their sense. Because the sight is not the means of judging of the true magnitude of objects, or of distinguishing between real and apparent motion, therefore every moral feeling, and every mode of reasoning in which mankind have, in all ages, coincided, may be wrong! Our philosopher might as well say that, because all the world, for many ages, thought water to be a simple element, therefore their universal consent as to the difference between truth and falsehood, right and wrong, virtue and vice, may, after all, be nothing but a blunder!

and doubt, the presumption which such a change would seem to afford against the truth of this belief, would be triumphantly brought forward by the advocates of infidelity. But it is well known that the very reverse of this is the case; that if ever, with men in general, or with the truly pious and devout, this conviction loses any of its strength or influence, it is amidst the bustle of life, the collision of interests, and the power of passion. When retired from the world, when, though in the full vigor of the mental powers, the great change is contemplated, generally speaking, this feeling deepens, this conviction irresistibly takes hold of the mind. When is it, on the contrary, that infidel principles have their greatest sway? Is it not in the riot of dissipation, the headlong pursuit of wealth and power, the strife of ambition, and the excitement produced by bold and daring companions? And does it not frequently happen that in retirement, in the silence of night, in the chamber of affliction, the infidel hesitates, doubts, and trembles; and that, in the prospect of death, he is glad to avail himself of church services or Christian prayers!

The advocates of infidelity feel the pressure of this difficulty, and endeavor to extricate their system by alleging the failure of the animal powers, the weakness of the brain, and the decay of the intellect. This is, however, but a poor shift. Does the retiring from bustle and tumult, does the subsiding of the passions into calmness, or the sobering down of the spirits so as to allow the judgment to have its undisturbed operation, enfeeble the intellect, or disqualify it for the perception of truth? It is an undeniable fact, that, not uncommonly, amidst considerable pain and weakness, or when very near the point of dissolution, and in the full apprehension of it, the mind retains its entire power, and is able to think, converse, and reason, with all its accustomed precision. And these are the cases and circumstances to which we refer, in which infidelity is commonly seen to be as destitute of truth, as it is of power to support and cheer the mind, and when the aid of religion, formerly neglected or despised, is invoked. We may be reminded of infidels who have died as they lived, and passed out of life with a bravado or a joke on their dying lips: we speak of cases which are common, and which will, I believe, be found to be general, in which the solution which infidelity offers will not apply. Is not this fact, then, enough to throw suspicion on a system which not only fails in the hour of trial, but which so commonly loses its hold on the mind, in proportion to the seriousness and sobriety with which it is disposed to view every great question?

In this class of arguments we may rank the moral phenomena attending the existence of atheistic principles. What is the soil in which atheism delights to grow; what is the aliment on which it feeds? Is it moral rectitude—is it virtue—is it purity of heart? Are these the qualities in which infidelity takes its rise,—is its power deepened in proportion to their increase, and weakened as they decline? Are scepticism and virtue so closely allied, that the advance or retreat of the one may generally be ascertained by that of the other? I ask the most determined advocates of the system which I am combating, whether their own observation has not shown them that the very reverse of this is the case? What exhibition of character has generally marked the transition to and from infidelity? And how has the standard of morals been affected by it? Is it not a well-known fact, that when a youth who has been brought up in habits of piety and virtue embraces sentiments of this kind, a visible deterioration of morals follows? Does he feel himself bound by the same restraints of sobriety, chastity, and temperance as before? Instead of this, do we not generally see the reins thrown on the neck of indulgence and passion, as far as circumstances will allow? To whom is atheism so welcome as to the most flagitious, and debauched, and unprincipled? And the return from vice to virtue is as generally marked by a deeper conviction of the existence and government of a Supreme Intelligence, and with a belief in the retributions of a future state. I do not say, however, that immorality of conduct, in every case, attends the adoption of these sentiments; much less would I be understood as making such an accusation against my sceptical townsmen; many causes may considerably modify and restrain the influence of opinion on conduct;—I speak of their general tendency and result, which have been such as to produce, on the minds of all who have had opportunity of observing, an assurance that infidelity is, in a very high degree, unfavorable to the interests of morality.

I know I shall be met here with an objection, drawn from the conduct of Christians; and I readily, though with deep regret, acknowledge that the great majority of Christians in name have done no honor to Christianity, that amongst them may be found instances of the greatest villany and the grossest vice. But does Christianity sanction the misconduct of wicked men, who are called by its name,—does it not renounce them, and pronounce on them its severest condemnation? If men will pretend to Christianity, who neither trust its promises nor obey its precepts, whose whole life is at variance with its spirit, shall their insincerity be charged on a religion which they insult and dishonor? Why should it thus be identified with persons whom it utterly disclaims? It has been the necessary result of national establishments of Christianity, that all who are born within certain geographical boundaries bear the Christian name; by the great majority of such persons, its principles are neither appreciated nor understood; nothing is known of it but a few outward forms, a few articles of a creed but seldom thought of, and a few sentences of prayers, repeated, almost mechanically, at certain seasons. The existence and perfections of God, with all the solemn and glorious facts of which revelation speaks, rarely occupy their minds, and still more rarely influence their conduct. We do not acknowledge the Christianity of such, we charge them with practical infidelity, who thus "have the form of godliness, but deny its power." There is, then, this important difference; among nominal Christians immorality prevails because the great principles of religion are seldom thought of, and have not been received with that sincerity and seriousness which would render them influential; it is not because they believe that an all-seeing God has his eye continually upon them, and holds them responsible for their conduct, but because they lose sight of the important fact, and act in a way inconsistent with its belief; but it is not because atheists lose sight of the great article of their belief, or rather of their disbelief, that they become vicious or immoral. The immoralities of nominal Christians arise from their want of Christianity. It will not, I presume, be said, that the vicious conduct of atheists arises from the want of infidelity.

Atheism has seldom had an opportunity of showing all its features and exerting all its power. For once, however, it appeared in full length exhibition, and had ample scope for all its energies. It arose, like man's evil genius, amidst the thunders, and the storms, and the earthquakes of the French revolution; its appearance was the signal for anarchy and wild uproar; it let loose all the fierce and pent-up passions of man's depravity, subverted the very foundations of morality, uprooted the social system, and threatened to sweep away all the institutions and the virtues of society from the face of the land. But the spectre was too horrible to be endured; the philosophical magicians shrunk from the spirit which their own sorceries had raised; the fickle nation, satiated with the riot of their own licentiousness, grew weary of the frightful power under whose auspices they had run to every excess; and the infamous Robespierre came forward to lay the fiend, and, in a public assembly, to compromise for the past frenzy of the people, by an oration, and a grand fête in honor of the Supreme Being.*

At this period, France was certainly in a state of great political excitement, but the instance adduced proves, I think, beyond doubt, that atheism was thought and felt to be far more congenial to the unbounded licentiousness of that period than any form of religion, or the mere admission of the existence of a God. It is undeniably true, that atheism offers an asylum from the persecutions of an outraged conscience, and a complete indemnity from the punishments of a future state; it must, then, ever present temptations to any one who longs to be free from the restraints of a Supreme Governor, and who dreads the responsibilities of a life to come. All our opinions on moral or religious subjects are greatly influenced by the state of the heart. We are seldom so completely intellectual in our decisions of this kind as we may imagine: when a man strongly wishes anything to be true, he is already half way towards the belief of it.* While, therefore, a man of a weak mind, but strong passions, may seek refuge from the accusations of conscience in the rites of superstition; he who is of a speculative turn, with a bold and daring disposition, and a heart reluctant to submit to the moral government of God, will be more likely at once to cut the knot, and to release himself from the annoyance of conscience, by embracing the tenets of infidelity. I do not say that it is exactly and exclusively by this process that the mind always arrives at such a result; its movements are often a complete riddle; but it is a natural, and, I believe, not unfrequent process, which is sufficient to account for the existence of infidelity, without the supposition of more than usual discernment, and a superiority to vulgar prejudices. Is it not sufficient to pervert the reason and to stifle the conscience of any man, that he should feel it to be necessary to his peace to deny his responsibility to a Supreme Being? Such being the moral phenomena attending the existence of atheism, and such the means by which it may gain possession of the mind, I submit to your consideration whether they are not sufficient, independent of any other proof, to throw a suspicion on its truth.

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* This fête was held on the 20th of the month Prairal, in the second year of the French Republic, that is, the 9th of June, 1794, and the ceremonies, I believe, took place in the Champ de la Reunion. A discourse was pronounced by Robespierre, as President of the National Convention, beginning thus—"The auspicious day is, at length, arrived, which the French people consecrate to the Great Supreme," &c. It seems that, after this oration, some effigy or symbol of atheism was cast into the fire, and a second oration was pronounced by the President, just at the time when atheism disappeared and some representation of Wisdom was exhibited to the people, commencing in this way: —"The monster, which the genius of kings vomited on France, is now annihilated; with it may the crimes and misfortunes of the world disappear," &c.

Here, then, we close our first lecture, and, in concluding, I earnestly and affectionately intreat you, my unbelieving hearers, who favor the atheistic scheme, to consider, with seriousness and candor, what has already been advanced. Do not say there has been no direct proof, no attempted demonstration of the existence of a God; this has not been our intention in this lecture, we reserve it to a further stage of the discussion. But, if I mistake not, a strong case has already been made out against the system which we oppose. We have shown that there is no possible source of information, from which an atheist can derive certainty that there is not a Supreme Creator and Governor of the universe;—that the general sense and reason of mankind have always been against him, a fact which atheism can neither deny nor explain;—that in those seasons when the mind is in the most favorable condition for the perception of moral truth, it is generally the farthest from this form of infidelity, which, in its moral bearings, is such as to make every lover of his kind tremble at the very idea of its prevalence. Now, I appeal to your reason, to your conscience, whether these are not strong presumptions against the system which you have espoused? I most solemnly intreat you to consider well the ground on which you stand, to review the steps by which you have advanced, to inquire impartially whether a fondness for speculation, a love of singularity, a desire to be released from the restraints which the belief in a holy, omniscient, and all-powerful Being imposes;—whether, in a word, other influences than a love of truth and a submission to evidence, may not have led to the adoption and maintenance of sentiments, at which the most sober and rational part of the community shudder.

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* "Ferè libenter homines id, quod volunt, credunt."—Cæsar, de Bel. Gal. lib. 3, § XVIII.

Let us be thankful, my Christian brethren, that those hopes which cheer our hearts, and light up our future prospects with glory and immortality, do not rest on an hypothesis which is incapable of proof; that we have all the evidence which is consistent with a state of probation of those sublime verities which inspire both our awe and our confidence; that in the history of the past and a view of the present, in the researches of antiquity and in the discoveries of science, in the regular course of nature and in its occasional and miraculous deviations, in the testimony of friends and the concessions of enemies, we have undoubted assurance that "the Lord he is God, it is he that hath made us, and not we ourselves; we are his people, and the sheep of his pasture." Let us rejoice that, while we contemplate the unbounded magnificence of his works, we can exclaim, "this God is our God, for ever and ever;" "who spoke in times past to the fathers, by the prophets," but who "hath in these last days spoken to us by his Son;"—that "life and immortality are brought to light by the gospel," which "is the power of God unto salvation, to every one that believeth."

LECTURE II.

ATHEISTIC HYPOTHESES EXAMINED.

JOHN XVIII. 38.—"WHAT IS TRUTH?"

THIS was the language of the Roman governor to Jesus, when he was brought before him as a prisoner by the Jews. What was the precise view of Pilate in asking this question, it is not easy to determine—whether he inquired judicially or philosophically. He may have meant simply, what is the truth respecting the charges brought against thee? Though it is more generally, I believe, supposed that, as there had been many disputes concerning truth, by the philosophers of that day, he wished the opinion of so distinguished a teacher, on this point. But, whatever may have been the particular view of Pilate, the inquiry is highly interesting, when applied to any branch of knowledge connected with our well-being. The governor of

Judea did not, however, appear to be very earnest about the matter, for, having proposed the question, "he went out," without waiting for an answer. This is too often the case; men's prejudices, or worldly interests, or idleness, too often render them indifferent, or prevent them from taking proper measures to obtain the truth. In the inquiry on which we have entered, indifference must be in the highest degree criminal; if there is any doubt in the mind as to the existence of a Supreme Creator and Governor of the universe, no pains can be too great, no labor excessive, which may be employed in endeavoring to ascertain the truth.

In the preceding lecture we showed the unspeakable importance of the subject; and, having noticed the state of the great question at issue, we produced some presumptive proofs which bear strongly against the truth of atheism. We now advance to another stage of the argument. Wherever we look we are surrounded with wonders; whether we view the heavens above or the earth beneath, the sea or the dry land, things animate or inanimate. We see grandeur which awes, and beauty which delights; masses of such a magnitude, and motions so marvellously extensive, that our minds are overwhelmed; and bodies and movements so exquisitely fine and delicate, as to set all imitation by human skill at defiance. We see the most perfect order amidst boundless diversity; and a most surprising complexity of parts, and means, and agencies, each complete in itself, combining to accomplish one object, as though animated by perfect intelligence, and working out that end with the greatest precision. In viewing this scene of wonders, the mind asks, whence all this regularity, this adaptation, this provision? Who formed and put together this machinery? The general sense of mankind refers the whole to a great First Cause, of infinite power and wisdom; the atheistic scheme resolves all into nature, that is, it excludes an intelligent being from the formation of the world, and affirms, that it is only by the unconscious powers of the material universe, that all things are made and preserved. Here, then, we join issue.

But, before we proceed farther, let one of the high priests of scepticism describe in his own words the sentiments of naturalism, that is, of the atheistic philosophy. "He (i. e. an atheist) is a thinker, who, having meditated upon matter, its energies, its properties, its mode of acting, hath no occasion to invent ideal powers, to recur to imaginary systems, in order to explain the phenomena of the universe, to develop the operations of nature; who needs not creatures of the imagination, which, far from making him better understand nature, do not more than render it wholly inexplicable, an unintelligible mass, useless to the happiness of mankind."* He farther represents them as "men without enthusiasm; who are guided by experience; who follow the evidence of their senses; who see nothing in nature but what they find actually to have existence, or that which they are capacitated to know; who neither do, nor can perceive anything but matter, essentially active, moveable, diversely combined, in the full enjoyment of various properties, capable of producing all the beings who display themselves to our visual faculties.* * * Natural philosophers, who are convinced that, without recurring to chimerical causes, they can explain everything, simply by the laws of motion; by the relation subsisting between beings; by their affinities; by their analogies; by their aptitude to attraction; by their repulsive powers; by their proportions; by their combinations; by their decomposition." *

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* System of Nature.—Vol. II. p. 503.

That the admission of an intelligent First Cause will account for all the phenòmena of nature, is too obvious to need a remark; and that we are compelled to have recourse to this, I hope satisfactorily to prove; but here it is assumed that the whole can be explained, without supposing any presiding intelligence, by the known properties of matter. Nothing can exceed the confidence with which these pretensions are advanced: it will be our business, in this lecture, to subject them to the test of investigation. Let us, in the first place, take a compendious view of the task which atheism has to perform.

Without entering largely into the subject of an ensuing lecture, the following may be considered as a brief sketch of what is demanded of any hypothesis which excludes a Creator. It has so much to explain, with reference to the human race, to show us, from the mere properties of matter, how man is what he is, in his body and his mind. The elements of his material structure have nothing peculiar in them; they are just the same as exist in other bodies, in different proportions and combinations. The bones, the muscles, the blood, may all be reduced to their primary elements, and every particle of the human frame may again enter into the composition of other bodies, organized or unorganized. And yet these elementary particles make a structure composed of a number of distinct machines, and chemical apparatus, pervaded by that mysterious principle which we call vital power, and all working to one end. It has, then, to show how, from the earths, and acids, and alkalies, and other kindred substances which abound in nature, such a being as man could be first originated; by what "relations," "affinities," "analogies," such combinations and selections should be made as constitute each particular organ or limb—an eye, an ear, or hand, for instance—and how all the muscular and glandular formations, with the secretive, digestive, and circulating apparatus, should happen to unite in one individual, and form a system of numberless adaptations, without the interference of any intelligent being, with wisdom to plan and power to execute. It has also to account for the mental phenomena, exhibiting wonders as great as those which external nature presents, if not surpassing them all; and to show us how, from material properties, could result the power of consciousness, memory, imagination; the capability of soaring in thought above nature, and beyond time; of generalizing, abstracting, and reasoning, in a manner the most acute and profound. Nor is this all; it has to account for the existence of a pair of human beings, coeval with each other, without which there could not have been a second generation.

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* Vol. II. 518, 519.

In addition to this, the atheistic philosophy must explain, without reference to thought or plan, the existence of innumerable tribes of creatures, in the air, and earth, and seas;—all possessing the most wonderful adaptation of parts, and properties, and instincts, to their peculiar mode of living,—and all existing by pairs!

It must also furnish a solution to all the fitting up, and furniture; all the provisions, conveniences, and embellishments of this place of man's abode; how it came to pass so marvellously, that the soils, the minerals, and the plants;—the air, the water, the sea, the tides, the dews, and rains;—that the days, the nights, the summers, and the winters, are just what a wise and powerful being might have made for man, though no one made these things, nor planned them,—that there was no design at all in them!

It has, moreover, to expound to us, how all the planets and their secondaries came into being, and were arranged into one system; how their forces were adjusted with a precision so marvellous as to insure the most astonishing regularity; and how, in a word, without any design or plan, ten thousand wonders of beauty, and order, and utility exist, just as though they were produced by the most wise and benevolent intention. This is but a very brief and slight sketch of what atheism has to perform. Let us examine the means by which it proposes to accomplish it.

The speculations of an imaginative philosophy, to account for the existence of the world and all its phenomena, have been exceedingly various; ingenuity and talent have expended a vast amount of effort in the construction of systems so to explain the origin of all things as to exclude a Creator from the universe. To enumerate all the wild conjectures, the absurd and fantastic fictions of these system-makers, would be a waste of time; whatever may be the modifications which their hypotheses may assume, we can conceive of three only by which an attempt can be made to account for the phenomena of nature, without admitting the creating power of a great First Cause. Either, first, that the world had a beginning without a maker. Or, secondly, that it has existed as it is from all eternity. Or, thirdly, that matter only is eternal, and that all its forms and combinations arise from the essential properties which it possesses.

That matter, with all its present modifications, had a commencement without a producing cause, involves an absurdity so gross and palpable, that it is doubtful whether any have deliberately maintained such a position. For, if there ever had been a period when nothing existed, nothing, it is evident, could ever have existed. It is impossible to conceive of the commencement of existence without a cause. That cause could not be in itself; since that would suppose its existence before it did exist, in order to produce itself—which is a contradiction. It could not be in any other being, since it is supposed that no other being existed. It follows, then, undeniably, that something must have existed from eternity.

We come, therefore, to the second hypothesis, that the whole system of nature has existed as it now is, from all eternity. This supposes that the motions of the planets, the succession of summer and winter, of day and night, of vegetables, of animals, of the race of man, have been eternal.* Let me here beg attention to a few preliminary remarks, before we examine this hypothesis. Whatever exists, must exist either necessarily, or by some producing cause. There is no medium. It must have the ground or reason of its existence either in itself, or in some other being. That which exists necessarily must be self-existent and independent; that which exists in virtue, or by means of some other being, is contingent and dependent. Necessary existence means that which cannot by any possibility be non-existent, or otherwise than it is. That which is eternal, must be self-existent, independent, uncaused, and necessary. The application of these remaks will, if I mistake not, show the unbounded absurdity of the hypothesis in question.

The present form and series of productions, and races of living beings, never, according to this scheme, had a beginning; that is, they are all eternal, and therefore without a cause, self-existent, independent, and necessary. Now, observe whither these premises will carry us. Trees, plants, animals, are all in their respective series eternal, and consequently necessary, self-existent, and independent. If, therefore, the series be self-existent and necessary, every part which goes to compose it must partake of the same quality; every individual plant, or tree, or man, must, therefore, be self-existent and necessary. But every individual of each series has a cause of its existence, is produced by another, and is dependent and contingent. Therefore, every individual is at the same time dependent and independent—self-existent and produced—necessary and contingent, which is absurd. If it be replied, that though each individual is dependent and contingent, yet the whole series may be independent and necessary, we ask, what is it which gives to anything its essential qualities, but the parts of which it is composed? To suppose that any number of dependent and contingent beings can make up a self-existent and independent whole, is as absurd as to say that an infinite number of dead bodies would make up a living mass, or that the continued addition of nothing to nothing would make something. To assert that every individual in a series has a beginning, and yet that the series had no beginning, is an insult to the understanding, which nothing but an inordinate attachment to a favorite hypothesis would for a moment tolerate.

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* This was maintained by some of the ancient philosophers, and appears to have been the opinion of the author of the 'Answer to Dr. Priestley's Letters to a Philosophical Unbeliever.' "We ought to argue only from experience; and experience would teach us that *the species of all animals has eternally existed.*" —p. 45.

And, farther, that cannot be infinite which has parts. For, to suppose that infinite in space which is composed of parts, would be to suppose it infinite and finite at the same time; since every part must have form and limit, and that in which there is no part that is not limited, must also be limited. In like manner, that cannot be infinite in duration which is made up of parts, since every part must have some point at which it commences, some point at which it ends: here then are distinctly limits to every part; and that in which there is no part that is not limited, and therefore finite, cannot be otherwise than limited and finite. Now, the eternal series which the atheist supposes would, if such could exist, be an infinite number of parts; but, whatever consists of parts is but an aggregate, a multiplication, of such parts, a continued repetition of one single part. Therefore, since this infinite series has no single part which is not limited and finite, it must itself be limited and finite. But an atheist may object that he does not apply the term infinite to this series; he only says that it has had no commencement, but has forever continued to flow on in one uninterrupted course. Be it so; we shall not quarrel about terms. It amounts to precisely the same thing, since, whether the series is said to be infinite, or without beginning, it is still composed of individual parts, can have no property but the accumulated properties of its parts, yet must have every property which pervades its parts. And, therefore, if every part has had a commencement, there can be no part that has not had a commencement; and to say, that while every part has had a commencement, yet the series itself has had no commencement, is as revolting an absurdity as can well be uttered.

Again:—that which is eternal can have nothing before it: there cannot be two eternities of different lengths. But, if "all things continue as they were," the planetary movements, and the annual and diurnal motions of the earth must be eternal. Now, at no given place are the day and the night simultaneous; one must precede the other. Assign the order of precedence to which you please, and every twelve hours there will have been a greater number of the one than of the other. Either the eternal series of days, or the eternal series of nights has been the longer; one of them, therefore, cannot be eternal; unless two eternities can be of different lengths, which is absurd. If either of the series be supposed to be eternal, and not the other, it can only acquire this property by the addition of one: it would follow, then, that one, added to a finite number, would make it infinite; and that the whole quality of infinity would depend on this unit. The same line of argument may be applied to the seasons, the lunations, the tides; and will show that it is impossible that what alternates can be eternal.

There is only one point more to which I shall apply this mode of reasoning; it is to the existence of the human race. If the race of man has been eternal, his production and dissolution must be eternal. But his production must precede his dissolution; therefore we arrive again at the absurdity of two eternities of different lengths. Nor is this all; for we know that all the particles which compose the human body are derived from that nutrition which comes primarily from the earth; they must, therefore, have existed as food, before they entered into the composition of his body, and in the great store-house, the earth, before they formed those organized substances which compose his food: this makes an eternity of a still different length. An hypothesis which involves contradictions so palpable and numerous, cannot be true, and ought not to be entertained for a moment.*

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* This kind of reasoning has sometimes been employed in the following manner against the hypothesis next examined, which, admitting that no form or combination of matter is eternal, yet maintains the existence of an eternal series of causes and effects. "The universe," says Mirabaud, "is an immense chain of cau-

But it is not by arguments of this kind only, that this hypothesis is refuted. Should any feel a difficulty in comprehending, or a reluctance in admitting reasonings of so abstract and metaphysical a nature, we refer them to history and to science, for a contradiction to the supposition that the world, as it now is, together with the human race, is eternal. The history of past ages, so far as its records have been transmitted to us, show that whatever may have been the duration of the world, the race of man, at least, is of comparatively modern origin. As we become acquainted with the earliest histories ex-

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ses and effects, which flow without ceasing, the one from the other."—System of Nature, Vol. 1. p. 89. Now, is it possible that there can be "a chain of causes and effects," of any kind, "flowing one from the other," without a first link? If it is contended that in this chain there is no first link, then there has been an eternal series, every individual of which is dependent, and yet the whole is independent, which, as before observed, is absurd. Every link hangs on something, and yet the chain hangs on nothing! If it be replied, though we should admit a first cause, or, to continue the figure, a first link, still the difficulty returns, what supports the first link? We answer, that by the admission of an Eternal Being, of necessary and independent existence, no such difficulty exists. We have, then, that which has necessary and independent existence supporting that which is contingent and dependent. If it be again said, the analogy fails, because a chain has an external force, the power of gravity ever operating, rendering support necessary, but that here is no external force; we reply, that the cause of dependence does not in the least affect the question; an effect, from the very nature of its relation, is as much dependent on the preceding cause, as any link, by the force of gravity, is dependent on a preceding link. To suppose an uncaused series of things, every one of which is caused, is an absurdity at which every unprejudiced mind revolts.

tant, we feel ourselves carried back towards the infancy of human society. We can trace backwards the progress of science, the advance of the arts, and the rise of inventions, to a time far enough within the limits which the Mosiac history assigns to the existence of man on this globe. It is not difficult to refer to periods, when every department of knowledge which bears on the improvement of man was in a rude and incipient state. Can it be imagined that this would have been the case, if the race of man had existed on this globe from all eternity? Let any one consider the advance which has been made during the last century; or, if this be considered a period too favorable to be selected, let him compare the state of the world two or three thousand years ago, as far as we have the means of comparison, with what it is now,—ask himself whether he can believe that the human mind had been working for millions and millions of ages, making experiments and gathering experience, and had brought society no farther on, in the march of improvement and science, than it was when Priam reigned at Troy, or the Pelasgi wandered in Greece?* If it be said, that the various arts and sciences may have existed in a high state of improvement, together with all the inventions of modern times, but that terrible catastrophes may have befallen the human race, or unfavorable circumstances arrested the career of improvement, and thrown it many ages back; we ask what monuments of these have been left? how is it that no vestiges of such a state of society have been discovered? But may not those terrific and general convulsions, traces of which some have imagined they have discovered in the several strata of the earth, have obliterated all such remains, and left posterity in utter ignorance as to the condition of former residents on this globe? We reply, if these destructive crises were but

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* Lucretius, though he attributes the formation of the world to the Epicurean atoms, introduces this argument to prove that the antiquity of the world is not great.

"Preterea, si nulla fuit genitalis origo
Terrarum et cœli, semperque æterna fuere;" &c.
De Rerum Natura, lib. 5, v. 325, &c.

Again, I ask, if heaven and earth possess
Uncaused existence, and eternal are,
Why have not poets sung of deeds achieved
Before the Theban war and fall of Troy?

Why fell so many brave, their deeds untold,
Nor live immortal in the roll of fame?
No, rather in its infancy is yet
The world, nor long ago began its course.
Hence 'tis that many an art but now expands,
E'en now progressive: much is added still
To navigation; nor have minstrels long
To harmony's sweet sounds attuned the lyre;
While nature and her laws but late are known,
And I, among the first, now first am found,
To teach the science in our native land.

In a note on this place, Dr. Mason Good observes, "This argument against the eternity of the world, and an infinite series of successions in animal life, so strenuously contended for by Aristotle, is strictly logical and impressive. Macrobius has copied and expanded it, in his book on the Dream of Scipio, 2, 10. 'Quis non hinc existimet, mundum quandoque cœpisse, nec longam retro hujus ætatem,' &c. "Who can believe otherwise than that the world had a beginning, and that, too, not long anterior to the present age, since we have no Grecian narrative of any thing, not even of splendid actions, and events that occurred partial, and left a portion of the human race remaining, would not they have transmitted to their descendants a considerable portion of the improvements which had previously existed? If it be supposed that they were total, then the present race, at least, had a beginning, the series was broken, and cannot be eternal.

Modern science also confirms the fact of man's recent origin. Geology, as far as it may be regarded as a science, is of very modern date. Its object is to investigate the surface of the globe, to mark the several strata which form its crust or shell, to arrange and classify the organic remains of the vegetable and animal kingdoms, and to ascertain the changes to which, in the lapse

earlier than two thousand years ago? Nothing worthy of notice, indeed, is recorded in any volume prior to the reign of Ninus, who is, by some, supposed to be the father of Semiramis. But if the world had existed from the beginning, or, in the language of the philosophers, even before the beginning, why, through an innumerable series of ages, was the present mode of life never once invented? Why no discovery of the use of letters, which alone eternizes the memory of things? And why are some nations, even at this day, scarcely initiated into the knowledge of a variety of useful facts? Even the Gauls knew nothing of the cultivation of vines and olives, till after Rome had acquired the full vigor of her youth; and other people, even at this moment, are totally ignorant of the most common and beneficial inventions among ourselves; arguments that seem strongly to contradict the eternity of things, and compel us to believe that the world had a definite origin, and that all we are acquainted with arose progressively afterwards."—Translation of Lucretius, by Dr. Mason Good, Vol. II. p. 262. Grotius has also added several testimonies to the same point, from Virgil, Horace, Pliny, Seneca, Tacitus, &c. De veritate Religionis Christianæ, L. 1, § 7.

of ages, it has been subject. It has already afforded much information of a curious and surprising nature, not only respecting the concentric layers of rocky substance which envelope this globe, the disruptions which they have apparently suffered, and the minerals of which they are the depositories; but also concerning animals of various kinds and sizes, which once tenanted this earth, the races of which are now become extinct. Now, every theory which is built on geological facts assumes, as one of its first principles, the commencement of the earth in its present state. Geologists may differ in their speculations concerning the primeval condition of the earth, whether it was a fluid mass, or a mere expanded nebulosity; whether the principal agent in producing the successive changes which brought it to its present state was fire or water; whether these changes were more or less sudden or gradual, at longer or shorter intervals, and accomplished more or less by secondary causes; but all agree in assigning to it a commencement in that condition in which it could be inhabited by man, and in considering that period to be not very remote. "We need not dwell," says one of the most distinguished geologists of the present day, "on the proofs of the low antiquity of our species, for it is not controverted by any geologist; indeed, the real difficulty, which we experience, consists in tracing back the signs of man's existence on the earth to that comparatively modern period when species, now his contemporaries, began to predominate." *

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* Lyell's Principles of Geology.—Vol. 1, p. 176, 2d ed.

Anticipating an objection that man may have previously existed for an indefinite period, but that some general ruin may have swept away all traces of him, he says, "Had these catastrophes been repeated through an indefinite laspe of ages, the high antiquity of man would have been inscribed in far more legible characters on the frame-work of the globe, than are the forms of the ancient vegetation which once covered the isles of the northern ocean, or of those gigantic reptiles which at later periods peopled the seas and rivers of the northern hemisphere."* "Geology," says a learned professor, "tells us, out of its own records, that man has been but a few years a dweller on the earth; for the traces of himself and of his works are confined to the last monuments of its history. Independently of every written testimony, we therefore believe that man, with all his powers and appetencies, his marvellous structure, and his fitness for the world around him, was called into being within a few thousand years of the days in which we live."† The supposition, therefore, of the eternity of the world, and of the races of living beings which it contains, not only involves in it absurdities at which reason recoils, but is also contradicted by the records of history and the discoveries of sicence.‡

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* Lyell's Principles of Geology.—Vol. I, p. 178.

† Discourse on the Studies of the University, by Professor Sedgwick, p. 26, 3d ed.

‡ Astronomy also furnishes an argument of a very powerful nature against the eternity of the solar system. The very regularity of the planetary motions in their immense orbits, which is so adapted to impress the mind with the conviction that there is

We proceed now to the remaining hypothesis, which assumes the eternity of matter only, and attributes all the forms of existence, animate and inanimate, brute and rational, to powers inherent in matter. In this scheme there are two positions taken; that matter is eternal, and that its inherent powers have produced all the beings which exist: each of these we shall now examine.

The first is, that matter is uncreated and eternal. This, indeed, is a necessary part of every atheistic system; since, if matter had a commencement, the existence of a Creator cannot be denied. The certainty of this part of the hypothesis, however, cannot be admitted; and I believe it may be shown that it is not only inca-

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some intelligent and presiding power which directs the whole, has been adduced by scepticism as a proof that this system of movements never had either a beginning or a maker. But, while there is a wonderful provision for correcting all those disturbing forces which would materially interfere with its regularity, there are facts which militate strongly against the perpetual durability of our system. Whatever light is, whether it radiates from the sun, or results from the vibrations of an ethereal fluid, the planetary spaces cannot, it seems, be entirely devoid of matter; consequently, of what must tend, in however a small degree, to interfere with the motions of these bodies. But the appearance of a comet of a very singular kind, the extreme tenuity of which allowed the constellations to be seen through its body, and the observations on its motions, have produced in the minds of astronomers a strong belief that there does exist a resisting medium, which, though extremely rare, must yet tend to retard the motions of the planets, and in time, though without the interference of a superior power it might be millions of ages, to effect the destruction of the whole system. That which is destructible, which is wearing itself out, the duration of which is lessened every moment of its continuance, cannot have existed from eternity. "We pable of proof, but is attended with such difficulties as destroy its credibility. There are two principles laid down by atheistic writers, as possessing the property, or nearly so, of axiomatic truth, by which the proof of the eternity of matter is attempted. The first is, that "out of nothing, nothing is made;" * therefore, it is concluded, the creation of matter is an impossibility. That if nothing exists, nothing can be produced, is a truth which no one will doubt; but to say that if matter did not exist, nothing existed, is completely begging the question. The atheist is not permitted, by any rule of reasoning, to prove that matter is eternal, by taking it for granted that no God exists, and then to prove that

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shall not dwell," observes Mr. Whewell, "upon any objections to this tenet which might be drawn from our own conceptions; or from what may be called metaphysical sources. Nor shall we refer to the various considerations which history, geology, and astronomical records supply, and which tend to show, not only that the past duration of the present course of things is finite, but that it is short, compared with such periods as we have had to speak of. But we may observe, that the doctrine of a resisting medium once established, makes this imagination untenable; compels us to go back to the origin, not only of the present course of the world, not only of the earth, but of the solar system itself; and thus sets us forth upon that path of research into the series of past causation, where we obtain no answer of which the meaning corresponds to our questions, till we rest in the conclusion of a most provident and most powerful Creating Intelligence."—See Mr. Whewell's Bridgewater Treatise on Astronomy and General Physics, p. 208, and the whole of the Chapter on a Resisting Medium.

* This was a great principle of the Epicurean philosophy, which was propounded by Democritus, and adopted by Epicurus.

no God exists, because matter is eternal. All that a sceptical philosophy is entitled to assume is, that nothing can be produced without an adequate cause; and this we readily admit. If there be no eternal, self-existent being, distinct from matter, then it must follow that matter is uncreated, and consequently eternal. But this is the very point in dispute. It may be assumed as an axiom, that nothing can be produced by nothing; the mind accedes to the proposition instantly; we can scarcely conceive of the possibility that any one in his sober senses should deny it: but that an eternal and infinite being is not capable of producing matter, is a proposition so far from possessing axiomatic certainty, that the contrary to it has been admitted, and is admitted, by the human mind, in innumerable instances, without feeling that any intuitive principle of belief is shocked. The boasted maxim, therefore, that out of nothing, nothing is made, can be of no service to the atheistic scheme,

Lucretius enlarges on it with great beauty and force, and adduces six arguments in proof of it. They, however, merely go to prove, what all must admit, that nothing can be the cause of its own existence. Lactantius, as quoted by Creech's annotator, very justly observes, "Sin autem intra Naturæ vires contineri voluerit Epicurus, non esset cur a nobis non laudaretur. Constat enim ex nihilo nihil fieri posse Naturæ viribus." 'If Epicurus were to limit this assertion to the powers of nature, I could not blame him; since it is evident that by those powers, nothing can be produced out of nothing.' The author of the 'System of Nature' lays down this maxim with great confidence. "All who are not enslaved by prejudice, agree to the truth of the position, that *nothing can be made of nothing*."—Vol. I, p. 50. Palmer calls this "an axiom, that from nothing, nothing can be made." Principles of Nature, p. 52.

unless it means, and is capable of convincing the mind, that an infinite, eternal, all-powerful being, such as God is conceived to be, could not produce matter. Lucretius affirms this;[*] and Mirabaud strongly intimates the impossibility that an uncreated and spiritual being should create matter or originate motion.[†] But to make an assertion of this kind is to presume to such a knowledge of what an infinite spirit is, and is capable of, such an acquaintance with matter, of the essence of which we know no more than we do of the essence of mind, and such an understanding of the mysterious nature of causation, as no human being can possibly have. It is, in fact, an assertion which savors more of the rashness of presumption than of the careful reasoning of philosophy.

Another principle which is confidently advanced, is, that as matter cannot be annihilated, it cannot have had a beginning.[‡] "It is easy to perceive, that that which cannot cease to exist, must have always been."[§] "Moreover, as all the world are nearly agreed, that matter can never be totally annihilated, or cease to exist, by what reasoning, I would ask, do they comprehend, how understand, that that which cannot cease to be, could ever have had a beginning?" * That we cannot annihilate matter is readily admitted; we have power over its forms only; but it does not follow, from our incapability, that no power exists which can effect this, or that it is, in the nature of things, impossible. There are many things which we cannot accomplish, which are not in their own nature impossible. Admit the existence of an infinite, eternal, omnipotent spirit, and you will find no difficulty in believing that he can create and destroy; that he can both produce matter, and, if he please, annihilate it. But not only is the assumed principle destitute of certainty, the reasoning built upon it, even if it were true, is inconclusive. It is asked, how "we can comprehend, how understand that that which cannot cease to be, could ever have had a beginning." We reply, that we can as well "comprehend" and "understand" this, as we can that anything at all exists. And so far from any difficulty being found in such a belief, we find that nothing is more common. What difficulty is there in believing in a commencing series, the terms of which shall go on forever, without the possibility of being exhausted? Has not the immortality of man's soul been admitted in every age, and almost in every country; and yet there has been no hesitation in believing in its commencement? This argument for the eternity of matter labors, therefore, under a double deficiency; the premises cannot be established, and if they could, the conclusion would not follow.

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[*] Nullam rem e nihilo gigni divinitus unquam."—De Rer. Nat. I, v. 151.

[†] System of Nature.—Vol. I, p. 52.

[‡] This is the counterpart of the Epicurean maxim before referred to, as having originated with Democritus. The whole is thus stated by Diogenes Laertius, IX. 44. *Μηδεν του μη οντος γενεσϑαι, μηδε εις το μη ον φϑειϱεσϑαι.* Lucretius employs several arguments to prove this, but they go no farther than to show that we never see matter become non-existent.

[§] System of Nature.—Vol. I, pp. 51, 52.

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* System of Nature.—Vol. I, pp. 51, 52.

There is an argument of somewhat different a nature used by the French philosopher, to prove the eternity of matter; it is couched in the following terms:—"If it be inquired how, or for why, matter exists? We answer, we know not; but, reasoning by analogy, of what we do not know, by that which we do, we should be of opinion it exists necessarily, or because it contains within itself a sufficient reason for its existence. In supposing it to be created or produced, by a being distinguished from it, or less known than itself, which it may be, for anything we know to the contrary, we must still admit that this being is necessary, and includes a sufficient reason for his own existence. We have not then removed any of the difficulty, we have not thrown a clearer light on the subject, we have not advanced a single step; we have simply laid aside a being, of which we know some few of the properties, but of which we are still extremely ignorant, to have recourse to a power of which it is utterly impossible we can, as long as we are men, form any distinct idea; of which, notwithstanding it may be a truth, we cannot, by any means we possess, demonstrate the existence." * The sum of the reasoning here advanced is this: if we find any difficulty in admitting that matter is eternal, and consequently, that it has necessary self-existence, we must on the other hand suppose, that if it had a Creator, this great First Cause must be necessary and self-existent; and this produces a difficulty greater still. The premises here are such as none will dispute: if matter be not eternal and necessary, the great First Cause must have

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* System of Nature.—Vol. I, pp. 96, 97.

eternal and necessary existence; but on the inference we join issue.

Does not the view which we take of a supreme and intelligent First Cause, accord far better with that perfection of nature which necessary, independent self-existence seems to imply. The highest order of existence of which we can conceive, is that which is dignified with intellect. It is this which gives man so decided a superiority over all other animated forms with which this world abounds. What is the bulk of the whale, the strength of the elephant, the fleetness of the courser, when compared with the phenomena of mind? What are all the forms which matter can assume, what is this ponderous globe, what is the vast system of which it forms a part, compared with the grandeur, and the power, and the beauty, which the human intellect is capable of displaying.* And yet intellect, even accord-

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* Though the following is not precisely the case which I should select as an instance of the superior elevation of the mind above all the sublimities of nature, yet it presents, in a manner as beautiful as it is just and powerful, the inferiority of all that is purely material to the moral grandeur which the human intellect is capable of displaying.

> " Mind, mind alone, (bear witness, earth and heaven!)
> The living fountains in itself contains
> Of beauteous and sublime: here, hand in hand,
> Sit paramount the Graces: here enthroned,
> Celestial Venus, with divinest airs,
> Invites the soul to never-fading joy.
> Look, then, abroad through nature, to the range
> Of planets, suns, and adamantine spheres,
> Wheeling unshaken through the void immense;
> And speak, O man! does this capacious scene

partial, and left a portion of the human race remaining, would not they have transmitted to their descendants a considerable portion of the improvements which had previously existed? If it be supposed that they were total, then the present race, at least, had a beginning, the series was broken, and cannot be eternal.

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* Lyell's Principles of Geology.—Vol. 1, p. 176, 2d ed.

is it more difficult to conceive this absolute perfection of nature to belong to an intelligent First Cause, or to senseless matter ?

And further, does not limitation of existence, either in duration or space seem contrary to the absolute perfection of a self-existing being? What is not eternal in duration cannot be necessary and independent in its existence; and what is limited in space is so far imperfect. Matter cannot be infinite; form is essential to matter, and what has form must have limits. But the mind finds no difficulty in admitting the infinity as well as the eternity of an intelligent, self-existent, First Cause. We conceive of him as existing in all duration, and in all space. This is precisely the idea which we form of the existence of God; exactly the view which the Bible give us of him. We cannot comprehend eternity or infinity; but the mind is irresistibly impressed with the existence of both these attributes. Make the attempt to suppose that either of these has no existence, you will find it impossible. If infinity exists, it must be the property of nothing, or of matter, or of a being distinct from matter. To suppose it to be the property of nothing, is absurd; it cannot, for the reason already stated, be the property of matter; the conclusion is inevitable, it must belong to a being distinct from matter; of whom we cannot conceive matter to be independent. And who or what is this great being, but that eternal, self-existing one, "of whom, and through whom, and to whom are all things."

But it is asserted, that it is "utterly impossible, as long as we are men, to form any distinct idea" of such a being. If by "distinct idea" be meant the idea of a being distinct from matter, we deny the assertion; the idea has been formed from time immemorial. If it be meant that we cannot form a clear idea of the fact that such a being exists, this we deny again for the same reason. But if the meaning be, that while "we are men," of finite minds, we cannot form an adequate idea of what is infinite, we admit it, and needed not an oracle to reveal it, or a philosopher to prove it. But to what purpose is this alleged? Does the atheist believe only things of which he has an adequate idea? Can he comprehend the eternity which he admits must have existence, and with which he is desirous of investing matter? When the mind arrives in its reasonings, at the conception of such a being as an intelligent First Cause, it feels, indeed, that it cannot comprehend his eternal and necessary existence, and it is overwhelmed by a sense of the infinity of his attributes; but it finds an adequate cause for all other beings, and an explanation of the phenomena of the universe. But if we think on the eternity and self-existence of matter, in addition to the impossibility of comprehending eternal and necessary existence, we feel the insuperable difficulty of connecting this absolute perfection of nature, with what appear manifest imperfections, its unconsciousness, its passiveness, its limited existence. The difficulty, then, is thrown back on the atheistic scheme, the force of this argument for the eternity of matter vanishes, and it leaves the position which it was intended to strengthen without support.

That it is impossible, "by any means we possess," to prove the existence of an intelligent First Cause, is an assertion which we hope, in our ensuing discourses, to prove is as destitute of truth as the arguments which we have examined are inconclusive. It only remains for us now to examine the second position taken by this hypothesis, that matter, by its own inherent powers, has produced all things which exist.

We have shown that the supposition of the eternity of matter, is not only perfectly gratuitous, but that it is attended with insuperable difficulties; but even if this were conceded to the atheistic philosopher, he would be far, very far from having accomplished his task: he has made scarcely any advance towards proving that the present system of things could have existence without a supreme and intelligent Creator. The problem which his hypothesis has now to solve is, given matter, an extended, moveable substance, to account for all the forms of beauty, and order, and adaptation, which we behold. That matter possesses properties besides these just specified, and that to these properties, acting by invariable laws, are to be traced the changes which we behold in nature, is not denied. But who invested matter with such properties, and who gave to this unconscious being laws from which it should not depart? Or, if this form of putting the inquiry be objected to, we ask, how is it that senseless matter possesses qualities so admirable, and acts so uniformly? All that we know or can know by experience, is, that certain conditions of bodies are followed uniformly by certain other conditions; that, for instance, the sudden collision of hard substances is followed by vibrations in the air, and these vibrations are followed by a peculiar sense in the organ of hearing; that the impulsion of a stone by the hand is succeeded by motion, and that the placing of any body at liberty from obstruction, is followed by its descent to the ground. The uniformity of these occurrences we call laws; but we must not forget, when we speak of matter acting by certain properties, and according to certain laws, that it has neither perception nor volition, and that it does not, therefore, properly speaking, act. Judging by the results of intelligence in their own minds, men in general assign these properties and laws to the communication, or the continued action, of a being of infinite wisdom and power. Atheism, however, affirms that these qualities are essentially inherent in matter, and co-eternal with it, and, consequently, a necessary part of its existence; and, unless this be true, the hypothesis in question vanishes into "airy nothing;" for, if matter did not eternally and necessarily possess them, they must have been communicated by a superior power, or be the mode in which the divine energy constantly acts. This is again an assumption, a mere opinion, and it might be met by an opinion which is, at least, equally valid, that an intelligent First Cause has invested matter with these properties. The atheist may allege that these properties and the laws of their action have, as far as we know, ever operated. This is granted, as far as human experience has extended; but our knowledge is limited; the utmost that can be said with safety is, that we never knew matter without them; but this does not prove that matter may not have received them, or that they belong to matter by necessity of nature. Accustomed as we are to see the uniformity of these laws, and the constancy of these properties, it is still possible to conceive of matter in being without them, or of their existing in a very different form. We can imagine the laws of mechanical powers and chemical agencies to be otherwise than what they are, without such difference implying the non-existence of matter, which must be the case, if they were necessary and essential. But let any one consider attentively the adaptation of the laws of matter and motion to produce the most beneficial results; the vast number and diversity of these laws ever operating in the great system, and the admirable manner in which each is adapted to the other, and all completely harmonizing together, and he will not only perceive that they are just the arrangements which an infinitely wise and powerful being might have made, but will also, if free from prejudice, feel it very difficult to resist the impression that these are all but secondary causes, producing, indeed, in their operation, innumerably diversified results, but all subject to an intelligent First Cause, and all the effects of his wisdom and power.

It is impossible to prove, and therefore ought not to be assumed, that matter possesses inherently, by virtue of its existence, any properties necessary and essential to its nature, except extension and solidity. But if matter had possessed only these, it must ever have remained an inert mass, incapable of producing anything to all eternity, or of affecting any change in itself. The Epicurean philosophy, and its poetic expounder, the elegant and accomplished Lucretius, therefore, superadded motion to its fundamental or essential properties, and thus attempted to account for all the formations of the universe. It is to this power of motion, the result of what they suppose to be the inherent and essential properties of matter, that modern atheists attribute all the changes, the combinations, forms, and various degrees and kinds of life which exist. It is necessary, then, to examine the competency of this substitute for a divine power. And, first, let us hear atheism speak for itself on this point. "If we contemplate a little the paths of nature, if for a time we trace the beings in this nature, under the different states through which, by reason of their properties, they are compelled to pass, we shall discover that it is to motion, and motion only, that is to be ascribed all the changes, all the combinations, all the forms, in short, all the various modifications of matter. That it is by motion everything that exists is produced, experiences change, expands, and is destroyed."* "It is thus motion generates, preserves for a time, and successively destroys, one part of the universe, by the other; whilst the sum of existence remains eternally the same. Nature, by its combinations, produces suns, which place themselves in the centre of so many systems; she forms planets, which, by their peculiar essence, gravitate, and describe their revolutions round these suns; by degrees, the motion is changed altogether, and becomes eccentric: perhaps the day may arrive when these wondrous masses will disperse, of which man, in the short space of his existence, can only have a faint and transient glimpse."† Not only are suns and systems produced, according to the atheistic scheme, by motion, but even man, in his bodily frame and in all the marvellous capabilities of his mind, is only the result of motion. "It is by the aid of this interior organ, (i. e. the brain,) that all those operations are performed which are attributed to the soul; it is the impulse, the *motion* communicated to the nerve, which modifies the brain: in consequence, it re-acts, gives play to the bodily organs; or rather, it acts upon itself, and becomes capable of producing within itself a *great variety of motion, which has been disignated intellectual faculties.*"* "Such, also, is the internal motion that takes place in man, which is called his intellectual faculties, his thoughts, his passions, his will."† Thus, then, it is distinctly and boldly stated, that the origination of all forms, the constitution of all life, the exercise, as well as the first creation of every faculty, corporeal or mental, is to be attributed, entirely and solely, to motion! If, then, motion produced all things, motion must have been before all things, as that which produces must be antecedent to that which is produced. It must also be assumed that it is eternal; for, if motion commenced at any period, it must have had a cause: to suppose that matter, after an eternal quiescence, originated motion, is an absurdity which cannot be entertained; it must, then, if it ever commenced, have had a cause extraneous to matter, and if that which produces all things but itself, was itself produced by a power superior to matter, and controlling it at pleasure, we arrive again at the idea of a supreme and eternal Creator. But the eternity of motion is affirmed by this system without hesitation. "If it be inquired, whence proceeds the motion that agitates matter, the same reasoning furnishes the answer; namely, that as motion is coeval with matter, it must have existed from all eternity, seeing that motion is the necessary consequence of its existence."* "We say, this motion is a manner of existence that flows necessarily out of the essence of matter."† Motion, therefore, must be, according to this supposition, an eternal and necessary condition of matter; that is, a condition as essential to matter as solidity or form, and without which it would not be matter; that is, it would have no existence. The whole superstructure then rests on this position, which, examination will, I believe, prove to be "the baseless fabric of a vision."

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* System of Nature.—Vol. I. p. 61.

† Vol. I. p. 70.

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* System of Nature.—Vol. I. p. 173. † Vol. I. p. 33.

First, let it be noticed, that there is no possible way of proving that motion is eternal; that it is so, can be no more than a conjecture, a supposition. As this hypothesis admits that the human race did not always exist, it is impossible to say with certainty, from any knowledge which the experience of man can supply, that motion never had a beginning. It is a mere assumption, at the best; and all the confidence with which it is asserted, can never make it anything more.

And is our knowledge of all the possible conditions of matter so universal and complete as to warrant an assertion, that matter may not exist, without those properties from which its motion flows? The author just quoted states that "every motion is the effect of gravitation."* If this were true, what should we say to the opinions of many distinguished philosophers, that there are bodies, such as the electric fluid, without gravity? If this be the case, it would prove by a fact that gravity is not a necessary property of matter, seeing it is not universal.

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* System of Nature.—Vol. I. p. 52. † Vol. I. p. 41.

Again; if motion be essential to matter, this necessary condition of its existence must refer to masses, or to the original individual particles of matter only. But masses of matter move by the law of gravitation, by which one body tends uniformly towards another. But if only one mass of matter existed, it could neither attract nor be attracted by another body, and, consequently, must remain immoveable. Nor could any projectile motion exist, without another body from which the impulse was received. If it be the individual and original particles of matter to which this condition is essential, then the existence of one particle alone, or removed beyond the sphere of attraction, if it have any limits, would be in the nature of things impossible, as it could have no motion, nor tendency to motion, without the existence and influence of other matter. Then, also, it would follow that every particle would be dependent for its existence on other particles, a supposition which appears absurd, and repugnant to that necessary and independent existence of matter which this hypothesis assumes.

And farther; according to this supposition, matter could no more exist without motion, than it could without form. It is a contradiction to suppose matter existing without extent,—extension enters necessarily into the definition of matter; but is it an equal contradiction to suppose matter existing without motion? Take extension from matter, and you annihilate it—it is matter no longer. But suppose every form and degree of motion or tendency to motion to cease; suppose every modification of attraction to operate no longer,—and what would be the consequence? The entire stagnation of life, but not the annihilation of one single particle of matter. The eternity of motion, therefore, as a necessary condition of matter, is not only a conjecture, but is a supposition attended with such difficulties as to render it entirely inadmissible, and utterly incapable of supporting the edifice which atheism seeks to raise on it.

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* System of Nature.—Vol. I. p. 43.

But, if we concede the eternity of motion, if we give to the philosopher all his "affinities," and "analogies," his "aptitude to attraction," and "repulsive power,"—all the supposed eternal properties from which eternal motion is supposed to spring—still, with all these, he is incapable of explaining the phenomena of nature, or accounting for the existence of what is now in being. In the planetary world, the laws of gravitation and of motion account for all the present movements; that is, we see all the motions of those celestial spheres, whether diurnal or annual, belonging either to the central body, the primary planets, or their secondaries, all performing their revolutions in a certain uniform manner, according to what we denominate laws. But the question is, not merely how they now perform these movements, but what originated them?—what combined the centripetal and centrifugal forces in such proportion, and at the same time gave a rotary motion to all these revolving bodies? Many attempts have been made to construct a theory which should exclude an intelligent Creator from these stupendous works of wisdom and power; but no theory that has ever yet been formed, no supposition that has ever yet been made, by all the ingenuity of fanciful speculation, or by all the philosophy and general learning which infidelity has employed, can satisfactorily explain the origination of these various and combined movements, from any properties of matter, without the intervention of some great moving cause, intimately acquainted with the sublime mathematics which they involve, and possessing a power to which we can assign no limits.

The same kind of reasoning will apply to any organized body, either in the vegetable or animal kingdom. We see around us millions of pieces of exquisite machinery, ever working in a way which all may admire, but none can imitate. Not all the skill and ingenuity of man, aided by the most extended knowledge, the most profound calculations, and the most refined analysis, can ever, with all the material in view, make anything like a living animal, or one part belonging to him, such as an eye, or ear, or hand; or even a lily, a rose, a leaf, or blade of grass. Supposing, then, all the material existing, with all the present properties of matter, how came these flowers and trees, and all the various kinds of living creatures, into being? Is there anything in our own experience, in the testimony of others, in our reasonings from analogy, that can give any support to the hypothesis, that matter, by its own energies, has produced the forms that exist? These appear to be all the sources of information which we possess, and if they refuse their support to the hypothesis in question, both philosophy and common sense must concur in pronouncing it unworthy of being entertained for a moment.

Experience is the most satisfactory manner of obtaining a knowledge of facts. The evidence of our senses we do trust, and must trust; this is an intuitive principle of belief which no man can resist. This is the only means we have of knowing personally what passes in the world without us. We know that the sun shines, that plants grow, that fire burns, that food nourishes, from experience. But will this assist the atheistic scheme? We have seen the powers of nature, the laws of matter operating in ten thousand instances; but have we seen the formation of an oak from any inorganic substance, a bird that sprang not from a bird, or a child without a parent? Experience tells us that, by what we call the properties of matter and the laws of their operation, seeds become plants, which in their turn produce seeds, that eggs become birds which also produce eggs; that children become adults, and then have children of their own; but it does not tell us, that by all the "affinities," and "analogies," and the various motions which are their result, a single seed, or egg, or infant was ever originated. Experience, then, lends no aid to atheism, but, as far as it goes, entirely contradicts it.

Testimony, which is the experience of others communicated to us, alike refuses its support to such a scheme. Much of our knowledge must necessarily be derived from others. Practical astronomers, and naturalists, and chemists, are comparatively few; but when their testimony is credible, we depend on it, with almost the same confidence as we trust our personal observations. For the facts of history we must depend on the testimony of others; and in addition to the credibility of the historian, and even the absence of any knowledge of him, there may be such internal evidence of their truth, they may so harmonize with each other, and be so strongly corroborated by many distinct sources of information, as to leave no doubt whatever on the mind of the certainty of these facts. But, has any naturalist, in his patient constant researches into nature, and accumulated knowledge of her productions in detail, ever announced to the world his discovery of a new species of tree, that sprang from no organic substance; or a new kind of animal formed by the powers of matter, without a parent? Has any chemist, who has in a thousand ways to put nature the torture to make her speak, wrung from her the secret how the present properties and powers of matter could originate a human being? Has he, by all the ingenious analysis and synthesis by which he decomposes the various combinations of elementary matter, and unites them again, discovered any properties that can explain the original formation of animals and men, and announced this process to the world? Does the page of history record any fact of this kind, well authenticated as having occurred in any age or any climate? There is a history, unquestionably the most ancient now extant, which, independently of its claims to inspiration, deserves much more attention for its recorded facts, than the philosophers of infidelty ever give it, which states that "in the beginning God created the heaven and the earth,"—that trees, plants, fishes, birds, beasts, men, were all originated by an act of divine power; and that human beings were created in the beginning, "male and female." All the early writings of historians and poets refer to the creation of man, of which evidence might be adduced to almost any extent, and from the records of almost every nation.* Traditions of this are extant all over the world, wherever man is found. There is no testimony, then, that will lift up its voice or utter a whisper in favor of the atheistic hypothesis; but so far as any testimony can be bought from ancient writings and almost universal tradition, it is almost point blank against it.

Analogy has been solicited to aid this scheme; but though pressed into the service of atheism, an examination of the evidence which it can give, will prove that it has nothing to say in its favor. Analogy has been defined, by a learned professor, as "a resemblance discernible by reason." To reason from analogy, is to draw conclusions respecting something which is unknown, by a comparison which it admits with something which is known. It is a mode of reasoning which we often employ, and, in many cases, it is the only kind of reasoning by which any conclusion can be formed, or any degree of certainty obtained. It admits of various degrees of certainty, from the slightest probability to assured proof; but this depends on the reality of the resemblance, the frequency of the instances in which it has been noticed, and the kind and degree of connexion subsisting between the known and unknown object. While, therefore, analogy may sometimes lead to the discovery of important truth, and tend strongly to corroborate a fact or opinion when evidence to a certain degree already exists—there is always need of care, in employing this kind of reasoning, that the resemblance be not imaginary, and the grounds of comparison too slight. There are two cases of analogical reasoning employed in the 'System of Nature,' in favor of the hypothesis, that matter, by its own properties and energies, originated all things.

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* See Grotius, de Ver. Rel. Chr. I. 1. § 16, where the learned author has cited a large collection of writers, both Greek and Latin, who refer the creation of the world and its inhabitants to a divine power.

The first is of a more particular kind, and is derived from what has been called equivocal or spontaneous generation. It was formerly imagined that, by a supposed plastic power in nature, by the heat of the sun, by moisture, and putrefaction, insects and even animals were produced. Later and more accurate observations, by the most eminent naturalists, have, however, proved the fallacy of this opinion, and shown that as wherever grass, flowers, vegetables spring up, though apparently in a spontaneous manner, seed must have been conveyed by the wind, or birds, or remained for a considerable length of time deposited in some material conveyed to the soil, till it found a proper pabulem—so that animals and insects have been produced from their kind; and that from inorganic matter no organized body is formed. "Before the invention of microscopes, the doctrine of equivocal generation, both with regard to animals or to plants of some kinds, was usually received, but this instrument soon convinced every intelligent person, that those plants which were formerly supposed to be produced by equivocal generation, arose from seeds; and the animals, in like manner, from male and female. But as the microscope threw light on one part of nature, it left another involved in darkness; for the origin of *animalcula infusoria*, or the spermatic animals already mentioned, remains as yet as much unknown as that of many other kinds was, when the doctrine of equivocal generation reigned in full force."* The manner in which these microscopic insects are propagated, is not yet fully known; there are, however, certain circumstances in which they make their appearance, there are certain conditions of matter in which they are generally found; and this fact is seized on by the atheistic philosopher, to prove that inorganic matter may, by its own properties, produce living beings, and therefore by analogy may produce man. "If flour be wetted with water," says the advocate of atheism, "and the mixture closed up, it will be found, after some little lapse of time, by the aid of a microscope, to have produced organized beings, that enjoy life, of which the water and flour were believed incapable; it is thus that inanimate matter can pass into life, or animate matter, which is in itself only an assemblage of motion. Reasoning from analogy, which the philosophers of the present day hold perfectly compatible, the production of a man, independent of the ordinary means, would not be more marvellous, than that of an insect with flour and water."* In this argument, there is a vitiating defect, and one which pervades, more or less, all the reasonings which we have hitherto examined, and that is, that something is taken for granted, as the basis of the argument, which is not proved, and the proof of which is absolutely necessary to its validity. Here it is assumed, that in the flour and water there were no eggs, or sperm, or whatever may be necessary to their propagation according to the usual course, of former animalcules. Because we have not been able to discover them, it does not follow that they do exist. We know that eggs, which contain the rudiments of future organized bodies, will remain for a long time without unfolding their organization, until they are placed in such circumstances as are adapted to give an impulse to their vitality, and that this may be the case with the infusoria and other kinds of animalcules is very probable. As these creatures are so exceedingly minute, that millions of them would not be so large as a mite, and are known to be living creatures only by their motion, is it likely that we should be able to discover their eggs, if such be their mode of propagation? They are so abundant, that water, both running and stagnant, salt and fresh, actually swarms with them. "They abound in decayed infusions of vegetable and animal matter, in decayed vinegar, in the secreted fluids of animals in the living state, in all stagnant waters, and in the waters of lakes and rivers. They are the food of zoophytes. We have found them in incalculable myriads in the water of harbors, and along our coasts, and many miles distant from land, among the Western islands; and they probably abound, not only in the waters of the tropical seas, but in every drop of the ocean."* The rudiments of a future race, therefore, may exist in a great abundance in the humidity of the soil, in the moisture of plants and vegetables while they are growing; may be floating about in the atmosphere, or in the water with which the infusions or mixtures are made, and waiting only a proper element or a due degree of temperature to start into life. It may be objected, that the vegetables of these infusions have been boiled, the water exposed to a high temperature, and even distilled, and yet these animalcules have been produced. But we are told that "they possess great tenancy of life. They suffer exposure to very high and very low temperatures without perishing. They may be dried to hardness, and again resuscitated by the application of moisture. According to the experiments of Baker, Needham, and others, they may be revived by moisture, after remaining many years in a dried and apparently lifeless state." * It is very probable, then, that whatever contains the germ of the future animalcule, may be secured from the heat of a boiling temperature, and may escape in the vapor of distilled liquid. † The provisions of nature for protecting buds and seeds, and whatever contains the elements of the future insect, are truly admirable. The assumption, then, that the flour or water contains the organic rudiments, from which, when brought into a proper condition to support them, the animalcules spring, is supported by a far higher degree of probability than the supposition that they are produced by the flour and water only, without any connection with beings of the same kind. It is supported, indeed, by the whole analogy of the economy of nature, so far as it is open to our inspection. Plants spring from plants, insects from insects, and men from men. This case of analogy, then, entirely refuses to aid the hypothesis, and not even an animalcule can be found to favor atheism.

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* Dr. Rees's Encyclopædia.—Art. ANIM.

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* System of Nature.—Vol. I. p. 45.

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* Professor Grant, of the London University, quoted by the Edinburgh Review for January, 1834.

† Some species of infusoria appear to propagate their kind by a division of the body of the parent. If this be the mode of reproduction with all these microscopic beings, then perhaps the parent stock, which appear in the mixtures or infusions, may have existed in a very attenuated form, with a suspended vitality, un-

There is another and more general way, in which an attempt is made to support this part of the atheistic scheme by analogical reasoning, the substance of which is this. We see by the properties of matter the germ burst forth, the plant shoot and grow, bear seed, and die; while other plants arise and go through the same course. The progress of a human being is similar, from his conception, to his infancy, his youth, his manhood, and old age. "In all this we see nothing but the effect of motion, necessarily guided, modified, accelerated, or slackened, strengthened or weakened, by reason of the various properties that beings successively acquire

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til a proper element produced their revivification, and rendered them visible to the microscope. At any rate, their multiplication in this way makes directly against the assumption that inorganic matter can produce organized beings, as here one is produced by the other.

and lose; which every moment infallibly produces alterations in bodies, more or less marked." * This is the sum of many of the statements and reasonings employed by sceptical writers. By the incessant motion of the various particles of matter, according to their respective properties, all the processes of nature are carried on; therefore, we ought to assign the first formation of every being, animate and inanimate, to the same cause. But here the analogy fails, and the reasoning is at fault. This is to account for the construction of a machine, by the unconscious mechanical powers that work it. The human machinery works by the mechanical and chemical properties of matter; but it must first have existed in order to work. The plant or animal in its embryo state, and in every succeeding stage, receives matter from without, which enters into its organization, but there is organization already existing. There is no analogy here on which to found an argument. We must see, in some department of nature, a flower, a shrub, a bird, or beast produced, actually produced by inorganic matter, working with all its "affinities," "analogies," and "powers of motion," before we can have any analogy from which we can conclude, that the various forms of being and degrees of life that now exist, were produced by the energy of unconscious matter. If analogy cannot be forced nor allured to speak in favor of the atheistic scheme, it has a voice to disprove and to condemn it: no organized beings in the vegetable or animal kingdom were ever known to be produced by the

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* System of Nature.—Vol. I. p. 64.

powers of matter; therefore their production is to be referred to some higher power.

We have now, with as much brevity as the subject would admit, examined the various hypotheses which exclude an intelligent First Cause from the creation of the universe;—we have "weighed them in the balance, and found them wanting." We have shown that there must have been something in existence from all eternity. We have shown that reason, history, science condemn the absurdity of an eternal series of animals and men. We have, lastly, shown the inadmissibility of the assumed eternity of matter, and the impossibility of its explaining, even were this conceded, together with all the properties which matter now possesses, the phenomena of the heavens and the existence of living beings on the earth: it follows, then, that there must exist an eternal and all-powerful being, distinct from nature, the Creator of all things. The idea, we admit, is overwhelming, but it does not involve those palpable contradictions and absurdities which attend the atheistic scheme, in whatever form it be presented. The admission of the existence of an uncreated, eternal being, of boundless power and wisdom, who formed and fills, sustains and governs all things, cannot but fill the mind with awe, and show to man his own littleness and vanity. But having arrived at this point, the mind finds repose; it recognizes an adequate cause for all the mighty wonders, the immensely varied and splendid effects which the universe exhibits. On every other supposition, we are lost in a labyrinth of endless mazes, and find ourselves bewildered among innumerable conjectures, and contradictions, and absurdities. Some of these we have now endeavored to expose: this has been the object of the present lecture, not so directly to prove the existence of a supreme and glorious Creator—though this is a necessary consequence—as to show the fallacy of every atheistic hypothesis, and its insufficiency to the task which it has to perform. If, then, the question of our text be proposed, "WHAT IS TRUTH," with reference to this momentous controversy, we think that, from the views we have already taken, we are justified in replying,—IT IS NOT ATHEISM.

LECTURE III.

PROOFS OF THE EXISTENCE OF GOD, FROM THE WORKS OF NATURE.

PSALM CXI. 2.—THE WORKS OF THE LORD ARE GREAT; SOUGHT OUT OF ALL THEM THAT HAVE PLEASURE THEREIN.

THESE are the words of the devout Psalmist, who, while he set an inestimable value on the divine word and testimonies, was often accustomed to "look through nature up to nature's God." Habitual piety, so far from rendering the mind insensible to the beauties of creation, views every object "in heaven above, or in the earth beneath," with that additional interest which is produced by the conviction that they are not the forms of random chance, or the results of a blind necessity, but the works of the great Parent of the universe, "the Father of lights, from whom cometh every good gift and every perfect gift." Hence, in every age, men of decidedly religious principle have ranked among the most distinguished admirers of nature. The annals of science, in all its departments, are enriched with the names of men, who were known and wished to be known, as firm believers in the existence of a supreme and glorious Creator. No mind of sensibility and taste can view, without emotion, the richly varied forms of beauty and of grandeur with which we are surrounded: under the influence of piety, this deep feeling of delighted admiration kindles the glow of devotion, and sends up the incense of praise to the glorious Being, of whose divine perfections they bear an impress. How often has the full heart, while viewing with bursting emotion this scene of wonders, exclaimed, with a poet of our own,

> "These are thy glorious works, Parent of good,
> Almighty, thine this universal frame."

Nature is the only God the atheist knows; yet the most exquisite pleasure which it is capable of affording, must be lost to the mind which sees in it nothing but unconscious matter, obeying laws without consent, and exhibiting beauties without intention. None can enjoy nature like those who view the whole fabric as the workmanship of him who, in our formation, gave us a susceptibility to all its loveliness, and a power to enjoy it; who read their Maker's name inscribed on every leaf, see his glory sparkle in every star, and recognize, in all his wonderful economy, the perpetual and varied manifestations of supreme benevolence. When the royal Psalmist beholds the sky glowing with the refulgence of day, or glittering with the gems of night, his devotion kindle—she exclaims, "The heavens declare the glory of God; and the firmament showeth his handy work." He loved, in his contemplations, to range through nature, to mark the descending dews, the fruitful showers, the revolving seasons, and the abundant and suitable provision made for every living creature. "O Lord, our Lord, how excellent is thy name in all the earth!" "The earth, O Lord, is full of thy riches." "Thou preservest man and beast; how excellent is thy loving-kindness, O God! Therefore the children of men put their trust under the shadow of thy wings." Sometimes, as in the 139th Psalm, the marvellous construction of his own frame excites his gratitude and praise: "I will praise thee, for I am fearfully and wonderfully made; marvellous are thy works, and that my soul knoweth right well." This is the interesting department of inquiry into which I shall now direct your minds. Christian, the God of revelation is the God of nature. He who redeemed man, made man; the same wisdom that arranged the covenant of grace, formed the economy of nature; he who speaks from every page of his word, speaks from every object in the wide creation, "Great are the works of the Lord, sought out of all them that have pleasure therein." And you who live professedly "without God in the world," while you accompany me in this excursion through some of the "paths of nature," let me intreat your fixed attention to those indications to which I shall point, of what appear to all but yourselves, and of what I sincerely hope may appear to you also, visible and impressive manifestations of a creating and presiding intelligence.

We have now advanced to that stage of the argument, in which we shall have more directly to adduce the proofs of the existence of a Supreme Creator, an intelligent First Cause of all things. Our last lecture was employed in hearing and examining evidence on behalf of atheism; now we shall produce witnesses who offer their testimony to prove that there is a God. Our object now will be rather to establish truth, than to demolish error. In doing this, we have a task at once more easy and more pleasant; it will not be necessary to enter the region of metaphysics, or to require any considerable effort of the understanding; we shall present to you what is so plain and legible, that "he who runs may read." Instead of pursuing error through the mazes of a false philosophy, in which it bewilders the mind, we shall exhibit some of the paths of truth, in which, I trust, we shall find both pleasure and profit.

The present subject opens so wide a range, that the great difficulty is, not to produce instances, but to make the selection. The fact is, that every part of the universe, so far as we are acquainted with it, is rich in manifestations of creating power and wisdom. We can only touch on a few, and these but slightly, in comparison of all the particular points of evidence which each may afford; yet those which will be adduced, will be found, I trust, fully sufficient for our purpose.

The nature of the argument on which we now enter is briefly this. Every effect must have its appropriate and adequate cause. Whether this should be considered an intuitive principle of belief, or whether it arises from experience, it is a principle so fixed in the mind, and universal, that we should consider the man who denies it either a knave or an idiot; and if he attempted, by his philosophy, to prove the contrary, we should deem him a metaphysical juggler, or, if sincere, the dupe of his own mystification. The innumerable effects which are continually produced within us and without us, though they arise from causes exceedingly diversified, may all be ranked in two general classes—those which result from the properties of matter, and those which arise from the mental operations. If, between those phenomena which are distinctly marked as belonging to the one or the other, there are some of a less decided cast, so that we know not under which to place them, our present argument is not affected by it; nor are the different views which may be formed of the mind itself of any consequence. We all know that consciousness, and volition, are as different from any of the chemical or mechanical properties of matter, as the sound of a flute is from the color of the violet, or the shape of a triangle from the fragrance of a rose. With one class of properties we become acquainted by observation on what passes continually before us, or by experiments made for the purpose; of the other we obtain a knowledge by attention to what passes in our own minds. We perceive matter acting by attraction, repulsion, collision; but none of the materials which the great storehouse of nature contains, possess intelligence or employ reason. But the intelligent mind acts by perceiving, comparing, judging, determining, designing. Matter has no foresight, no precaution, no selection; can anticipate no evils, make provision for no difficulties. But mind, when its objects are selected, chooses means, employs instruments, foresees impediments, and provides for meeting them. There are some results which we always ascribe to the known properties of matter, to its various forms of attraction, repulsion, and to the laws of moving bodies; thus all the effects produced by the working of a piece of clock-work, or mill-work, or music, however various its parts and movements, arise, we know, from the laws by which matter acts. But there are many results which we as invariably ascribe to the operations of mind; such as the bringing together and adjusting the various parts of any piece of machinery, the disposing of the letters of the alphabet in such an order as to form syllables, and words, and sentences; or the laying of certain mineral or vegetable mixtures on canvas, in such a manner as to represent a human figure, or a landscape. Though in all this we see every thing done by the properties of matter, yet we irresistibly feel the conviction, that in combining these various portions of matter, a mind has been planning and selecting, in order to accomplish an end. The more necessary, important, and beneficial the end, the more complex and numerous the parts which unite to accomplish it; and the more certain the result, the more deeply do we feel convinced that thought has been closely applied, that the mind has been careful in its selections, that a competent knowledge and wisdom have guided the whole process, and that the design, in fact, preceded the workmanship which so decidedly exhibits it. If, therefore, we see in the objects of nature indubitable marks of contrivance, skill, foresight — a simplicity of design wrought out by a complication of parts and movements — especially when added to this, the end thus accomplished is of essential consequence and eminently beneficial, we ought to feel the same conviction; and I venture to say we do feel it, always feel it, unless some strong prepossessions have warped our judgment.

Should it be said, that in the construction of houses, machines, books, we have experience to guide us—we know that such things have been produced by the genius and power of man before, and therefore, on seeing any object of this kind, we come to a safe and certain conclusion; but that for the production of a world, a tree, a man, the effects are so very dissimilar, that never having seen or heard how such an object was first formed, we are not competent to decide; this would be only evading the argument; since the question is not how similar or dissimilar the effects are, in any point but one, and that is, whether in the objects of nature, as well as in those of art, there are any indications of contrivance or design; whether in the one, as well as in the other, there are numerous parts, regularly disposed, accurately adjusted in their proportions, nicely adapted to each other, each independent in itself, and performing its own functions, but all harmonizing together and working out one beneficial end? If we find an object of this kind, whether we have ever seen any thing like it before or not, whether it comes within the limits of human power or not, design there certainly is, thought has been employed, mind has been at work. Mathematical demonstration the subject will not admit of, it is a kind of proof which is inapplicable; but if we see instances of indubitable foresight, precaution, intention, in any of the works of nature, then we have a moral certainty, as a most assured proof, that there has been an intelligent, though invisible cause operating, who is the great designer and the mighty agent in their production.

Nor can this conclusion be avoided, though it is sometimes attempted, by attributing all these results to the necessary laws of nature—that is, to the certain and uniform connection of cause and effect. The question lies within a very narrow compass: Can all that we see in nature be the result of chance, or are we compelled to admit design? Were the various forms of living beings produced intentionally or accidentally? There is no alternative; one or the other must be admitted. To say that it was by necessity, is no answer to the question, since it may apply alike to either. A man may throw down a handful of printing-types; the position of the letters is by chance; it may happen that *a* and *b*, or any two or three consecutive letters of the alphabet may be found together; we should term this purely accidental. Now, there is a cause why every letter, in falling, took the exact position which it occupies: here, then, "the necessary laws of nature" are combined with chance and accident. But the same man carefully picks up the letters from the heap, and so arranges them that he works off with them a fable or an ode. In every thing that is now done, there is just as necessary a connection between cause and effect as before, but here the necessity is combined with intention and design. In the one case, the position of the letters was left to the mere properties of matter; in the other, they were arranged under the direction of mind. When, therefore, we speak of chance or accident, we mean not an occurrence without a cause, but that which excludes foresight and intention; and when the atheist introduces his necessity, it cannot touch the argument from design. We have only, then, to produce cases of manifest intention and design, and our argument is invincible; there must have been an intelligent mind to form the intention, and to accomplish the designed end.

Nor need we go far in quest of instances of this kind; the world is full of them, they exist in every department of nature. We shall not, however, examine the curious structure and admirable physiology of plants; we shall not investigate the wonders of insect mechanism, nor those exhibited by the inhabitants of the seas, the air, or the forests; the striking adaptations of various kinds, and the marvellous instincts which they exhibit—which the properties of matter can no more account for than they can for the chronological tables of the Arundelian marbles, or the hieroglyphics of the Egyptian tombs and the mummies which they contain. But, leaving the wide range of the vegetable world, and the animal kingdom in general, I shall confine myself to MAN, and shall take a view of him in HIS PHYSICAL STRUCTURE—HIS RELATION TO THE WORLD WHICH HE INHABITS,—AND AS AFFECTED, BY THE RELATION OF THAT WORLD, TO THE SYSTEM OF WHICH IT FORMS A PART.

Let us first take a view of the structure of man's frame, and see if we can find any clear indications of intelligence and design in its formation.

A necessary preliminary, in any building or piece of machinery, is the construction of its frame-work, by which the parts may be all firmly sustained and held together. In the human body this is the skeleton. In this, its perfection is, that there should be every thing sufficient, and nothing redundant. If there were any thing deficient, weakness and incompetency for the end designed would ensue; if there were more than was necessary, it would needlessly encumber the working of it. In the human skeleton, there is bone wherever bone is needed, but not one bone, however small, nor an inch of bone, is useless.

The material must not only be in sufficient quantity, and of such a quality as to secure solidity and strength, but also, as in every construction that is to be movable, provision must be made for its being sufficiently light. A failure in either case would be a serious defect. Now the substance of support to our body, the human bone, exactly answers these conditions. It is composed chiefly of phosphate of lime, which gives to it nearly the consistency of stone, with the lightness of wood. But there is another apparent contrivance, founded on geometrical principles. It has been demonstrated, that the same quantity of material formed into a tube, is much stronger than when it is perfectly solid. In the long bones this formation obtains; thus, without an increase of weight, there is a considerable addition of strength. But in producing that degree of consistency which we call hardness, the bone might have become brittle, and very liable to be broken, or, in avoiding this, it might have been too flexible, and thus incapable of supporting a weight; but it is neither the one nor the other. It has strength to support, without being liable to chip or crack like porcelain.

But, besides support, protection is requisite, and this is amply afforded by the bony structure. Whatever is delicately fine, and thus easily susceptible of injury, or whatever is highly valuable, and especially whatever unites both these qualities, we take much care to guard. A watch has a metal covering to preserve the nice workmanship from injuries, by being crushed by external violence, or damaged by the dust; a piano-forte has a case; our deeds are deposited in iron chests; the Tower, with all its defences, secures the regalia; in all this we see prudent precaution and evident design. Now, in all the means taken to prevent apprehended danger, which, in these or any other cases, give us the assurance of intelligent precaution, there is nothing, can be nothing, more palpably evident, than the design to preserve, which is manifest in the protection afforded to every weak and vital part in the human frame. The skin may be torn, a muscle may be pierced, or a part of it cut away, and yet the machine may go on working; the wound may heal, and no serious injury be sustained. But if an organ, so precious as the brain or heart, or any vital part, be injured, the mischief affects the whole system, and may be irreparable. See how the brain, seated, as it were, on the throne of the human domains, is guarded. The bones of the cranium rise up around it like solid walls, and, uniting into an arch, spread a dome above it. Within is a plate, hard and brittle, which no point can easily pierce; to prevent this from being chipped or cracked, there is an exterior plate, of less hardness, but of less susceptibility to injury from a blow; and over the whole is spread a soft, thick mat of hair, which tends materially to break the shock arising from collision with any hard body, and thus to save the brain from concussion, while at the same time it gives beauty to the appearance. Near the brain, and in direct communication with it, are the eyes, important inlets of information from the external world. These organs are of exquisite workmanship: an exposed situation would be highly dangerous; they are placed, therefore, in bony caverns, which throw their strong arches over them to protect them. The spinal marrow is a continuation of the brain, which supplies the body with nerves; how shall its safety be secured through the whole length of the trunk? For this purpose it has a hollow way made through the solid bones of the back, and reposes in safety in the midst of the spine. The heart and lungs are ever busy, day and night their labor is performed, an obstruction from injury is certain death. Behind, the spine is the central guard, while from it the ribs extend in a circular form, till they join a front defence, which is the breast-bone. Thus room is afforded for the play of these organs, and ample protection is secured. The whole of this frame-work stands on two firm pillars, which rest on pedestals, and sustain the structure. Does this evident protection, in all these instances, look like chance-work, or the operation of the unconscious properties of matter? What could intelligence have done more?

But this was to be a movable structure; if the frame-work had been all of one piece, it might have been as firm and as solid, but it would also have been as motionless, as a statue. Vegetables are fixed to one place, their nutriment is ever at hand, all their wants are supplied without any effort, they have neither the need nor the power to alter their situation.* But man is a locomotive machine; he has the power of self-motion, as well as the necessity of transferring himself from place to place. He must seek his food and prepare it; he must provide himself with clothing and put it on; he has a thousand offices to perform, and ten thousand motions are requisite. If man's frame had been made immovable, or but of one piece, he must have perished. In order, then, to admit of all these motions, the skeleton is divided into a great number of parts, of such size and shape, and in such positions, as to allow of motions of innumerable variety The number of distinct bones is two hundred and fifty-four, all connected and combined into one piece of frame-work. Now, to manage all this, so the connection shall be at once firm, the motions easy, where motion is needed, and capable of being continued for a long time together, requires no small contrivance and dexterity. If we could conceive of a person, without any knowledge of the human frame, a most ingenious mechanic, who should be required to give a plan for such a piece of frame-work, comprising within the dimensions of a human body all the requisites of strength, durability, firmness, lightness, protection, and thousands of motions, in almost every possible direction, we should feel that it was a task which, if at all practicable, would require the utmost knowledge, and skill, and long contrivance. How, then, can we suppose that all these provisions are made, and these conditions actually fulfilled, by any thing short of a most surprising wisdom and intelligence? Let us see how all this is effected.

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* There are some few exceptions, particularly in aquatic plants, which float on the surface of the water. For an account of these, and many remarkable phenomena in the vegetable world, see an interesting work, entitled 'The Physiology of Plants,' which, though anonymous, is generally known to be the production of Mr. Murray, whose lectures in various branches of science have profited no small number of our countrymen, in different parts of the kingdom, and who is the author of several publications, in which science pays a willing homage to divine truth.

As the various pieces, which constitute this framework, are necessarily connected together, their extremities do not terminate abruptly, but are formed to fit each other with the most complete adaptation. If they had been formed accidentally, without any design to fit each other, there would have been a great probability that the extremities of the movable bones might some of them have been points, or that two concave or convex extremities might have met, which would have rendered motion impracticable. But we see a convex always working in a concavity, a tenon in a mortice, a projection in an indentation. No two parts which a carpenter intends to unite are formed with a more evident adaptation, the one to the other.

As the motions to be performed are many, the joints vary considerably, according to their relative position, and the kind and extent of motion needed. The principal agents in the movements of the body are the arms and legs; but in each of these upper and lower extremities, the bones are so divided, and arranged, and articulated, as to admit of very extensive, varied, and complicated movements. The hip and the shoulder joints are formed by the working of a globular extremity into a kind of cup, called frequently the ball and socket joint. By this mode of articulation, motion is admitted in any direction. Now this kind of joint was particularly necessary just in this place, as all the motions which any part of the limb has to perform depend on this. It is just the place where an ingenious mechanic would have fixed a joint capable of this rotary motion. It is also worthy of remark, that at those joints, where there is any considerable weight, or liability to pressure, the uniting extremities are much larger than the other parts of the bone; by this means, the weight or pressure is better supported, and there is less danger of dislocation. At the elbow and knee, the joints are of a different description, and consist of eminences and hollows adapted to each other. In other cases, the bones work by sliding over a smooth surface. But there are two very peculiar kinds of articulations, which, though often noticed, we should not be justified in omitting.

The first is, that which admits of the motions of the head. On many accounts it was necessary that the head should have a freedom and facility of motion in every direction. Here are fixed four of the senses, by which the mind within holds intercourse with the external world. It is very necessary that the organs of sight and sound, of tasting and smelling, should be presented with great ease towards any object. How is this to be accomplished, consistently with a firm position on the bony column which supports the head? On the uppermost bone of the spine, thence called the atlas, the skull, with its important contents, rests; and the motion which this articulation admits, is that of playing up and down, or forwards and backwards, in a hinge-like joint. By this we can elevate or depress the head, so as to command a considerable extent of view in a perpendicular direction. But in order to allow of motion in a horizontal plane from right to left, the second bone of the vertebral column, called the dentatus, has a projection which fits into a corresponding hollow in the atlas, or bone which rests upon it, so as to form a swivel joint. In the perpendicular motion, therefore, the head moves on the atlas; in the horizontal movement, both the head and the atlas move on the dentatus. Is it possible to believe that in this there was no intended provision, no thought, no mind employed? Is there any ingenious contrivance to accomplish an end, in any department of mechanics, that more distinctly announces design?

Another kind of articulation which deserves notice, is that which occurs in the formation of the spine. This is the column which supports the upper part of the body, and is fixed upon the pelvis, which, extending its base, is sustained by the two great pillars of the human fabric. While, in various ways, strength, firmness, and solidity are secured to this important pillar, its peculiar construction gives it that necessary flexibility, of which a single strong bone would not admit. It is composed of twenty-four distinct bones, the surfaces of which do not come into actual contact with each other, but between them is an elastic cartilaginous substance, which, by allowing the vertebræ to be brought nearer to each other, on any one particular edge, admits of the bending of the body in that direction. By this admirable contrivance, the spinal marrow, which passes through the entire vertebral column, is preserved from those numerous occasions of pressure, which it must otherwise sustain under the circumstances of various flexion to which the trunk is subject, and without which provision the most serious consequences would perpetually ensue. It possesses, by this means also, in connection with its slight curvature, an elastic property, "without which every motion of the body would produce a jar to the delicate texture of the brain, and we should suffer almost as much in alighting on our feet, as in falling on our head."* Is it possible not to perceive, in the curious mechanism of this solid, yet elastic pillar, through which that "silver chord," the spinal marrow, passes in safety amidst all the motions of the body, that the difficulties so ingeniously obviated were foreseen, and that the advantages thus obtained were designed?

We must pass over the curious mechanism of the hand, with its twenty-seven bones, admitting of motions and positions almost innumerable; and the no less remarkable construction of the foot, with its thirty-six distinct parts, so put together, as not only like a pedestal to support the fabric, but built also on elastic arches, to preserve the whole from sudden shocks in walking, and to give a springiness to its motions. Every part of this admirable structure bears an impress of designing wisdom, which the study and the skill of those who have had the longest experience in mechanical constructions can seldom equal. "Men proceed," says a distinguished ornament of his profession, "in a slow course of advancement in architectural, or mechanical, or optical sciences; and when an improvement is made, it is found that there are all along examples of it in the human body, which ought to have been marked before, and which might have suggested to us the improvement." * "We undertake to prove," says the same author, "that the foundation of the Eddystone light-house, the perfection of human architecture and ingenuity, is not formed on principles so correct, as those which have directed the arrangement of the bones of the foot; that the most perfect pillar or kingpost is not adjusted with the accuracy of the hollow bones which support our weight; that the insertion of a ship's mast into the hull is a clumsy contrivance, compared with the connection of the human spine and pelvis; and that the tendons are composed in a manner superior to the last patent cables of Hüddart, or yet the more recently improved chain cables of Bloxam." *

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* Animal Mechanics,—p. 8. One of the most valuable and interesting publications of the Society for the Promotion of Useful Knowledge, which, it is understood, is the production of Sir Chas. Bell.

Before we quit the skeleton human frame, we must be permitted to make an additional remark or two re-

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* Animal Mechanics,—p. 2.

specting the joints. As these are to be in play during a number of years, two things are highly necessary; that provision should be made against the wearing away by friction of the joints which work into each other, and against their being easily displaced. To accomplish the first object, the articulating surfaces are covered with a cartilage soft and smooth as the best polished ivory. And to facilitate, still farther, the motions of the bones in the joints, and to prevent the injury from friction, there are vessels which secrete an oily mucilage, which continually lubricates the joints. To prevent dislocation, the bones are, at these joints, firmly fastened together by ligaments, formed of a strong pliant substance, which, while they admit a freedom of motion to a certain extent, keep every thing in its place. If these be considered accidental circumstances, they are certainly accidents of the most fortunate kind, as without them all the other admirable adjustments would have been worthless, or nearly so, and the working of the human machine would have been impracticable. Let me beg my sceptical hearers to put together these notices of a few, a very few, of the striking adaptations, the evident provision against evils, and the curious arrangements, by which advantages are obtained, which the human skeleton exhibits, and to allow, without prejudice, their due force on the mind, and I can scarcely think that they will resist the strong proof of intelligence which these display.

We have seen that, while the support of the fabric is one object attained by this bony frame-work, there is another intention quite as evident in their formation, and that is motion; and that such is the mechanical skill with which they are disposed, as to admit of innumerable movements, in almost every direction. The bones may, therefore, for the most part, be considered as a system of levers. But how are these levers to act in all the required directions? To all the movable spars of a ship, we see ropes attached; the yards, the gafts, the booms, all have their cordage, to move them in different directions. Hence the numerous ropes, running, some horizontally, others perpendicularly, parallel to each other, crossing each other, appear to a landsman all intermingled and confused, while to a sailor the use of every one is known, and he sees that the place, the size, and direction of every one is just what it should be. To a person unacquainted with the anatomy of the human frame, if the covering were removed, he would see a number of distinct layers of flesh, laid on each other, and crossing each other in many directions; and, on a closer inspection, he might see the attachment of the muscles to the bones; still he might view in the whole nothing but a mass of flesh, without perceiving any thing like mechanical contrivance. But in this the eye of the anatomist sees a fine, a beautiful, a most accurately adjusted piece of machinery, with the office of every part of which he is acquainted, and the ingenious construction of the whole of which he admires. Let us take a brief and cursory view of the muscular system, and see whether we can discover any evidence of intelligence and skill in its formation and its working.

The composition of a muscle is itself a very curious subject of inquiry. It consists of three parts;—the extremity of its origin, where it is fixed on the bone which is to be the support of its motion; such as the insertion of the tendon of the biceps flexor cubiti, that muscle which bends the fore-arm into the scapula by two heads;—the middle, or fleshy part of the muscle, which, in the instance now mentioned, continues from the shoulder down to the front of the fore-arm;—and the tendon at the other extremity, inserted into the bone, which it is intended to move as a lever, which insertion takes place, in the case now specified, in the radius, one of the bones of the fore-arm, a short distance from the elbow. The tendons of a muscle are white, and exceedingly strong. They are composed of small fibres, so plaited and interlaced together, as to give, on mechanical principles, the greatest degree of strength. The muscle to which these tendons are attached, consists of an inconceivable number of fibres, laid together in small bundles, and united firmly by the cellular substance. When the anatomist proceeds to separate these threads, he finds each bundle inclosed in an appropriate case, and this small bundle inclosing a number of still smaller bundles similarly inclosed; and, continuing his researches by the aid of the microscope, he finds each of these again inclosing others, till he can go no farther; the elementary thread or fibre being too fine to be traced. Now, these delicate fibres, in comparison of which the thread of a spider's web is a coarse rope, are laid and united together with an art so admirable, and the mutual support which they render is so complete, that the muscle of which they are composed is capable of sustaining an enormous weight, and will admit of the breaking of a bone before they yield. It is on this principle that you first comb your wool, to get the filaments straight and parallel, that they may be in a position to give mutual support, and take care that such a number of them shall be united together as may give the requisite degree of strength to the yarn.* Certainly, if contrivance had been employed with the greatest dexterity, a more complete result could not have been obtained.

But how is the motion of the bones, in all the necessary directions, effected by these muscles? In a way which, if devised by human ingenuity, would have been considered a master-piece of skill. The whole machine is to be transferred from place to place, with ease and speed, by a power working within it; and all its various parts must admit of separate movements. For every distinct movement, one muscle, at least, is provided, one end of which is fixed securely to a bone which is the support of the motion, and the other by its tendon to the part to be moved; the middle part, called the belly of the muscle, contracts by a power dependent on the will, and swells into a larger bulk, and thus draws the movable bone, the joint on which it turns being the fulcrum, with considerable force. Of the extent of this power we are sensible by our muscular action. Such, indeed, is the power of the contracting muscle, that it can actually afford to spare a portion of it in order to secure rapidity of movement. You are all aware of the great principle of mechanics; that power can only be gained at the expense of time, or, what is equivalent, motion; and that a rapid motion can be secured only by the sacrifice of power. But it is sometimes an object of considerable importance to obtain a rapid movement, and then, as in a lever of the third kind, the power is applied between the fulcrum and the other end of the lever. Now this construction frequently obtains in the machinery of the human frame. Take, for instance, the muscle already referred to (the biceps flexor cubiti.) One extremity being fixed in the shoulder blade, it passes onward, till it is inserted in the main bone of the fore-arm. The elbow joint is the fulcrum on which the lever rests, and the insertion of the muscle is within a very short distance of the joint; by this means there is a great loss of power; if the insertion had taken place at any point nearer the wrist, a greater weight might have been raised, but as it is, besides the great inconvenience in point of size, which an attachment lower down the arm would have occasioned, the hand moves with a velocity which is far more frequently needed, and more generally useful, than the capability of raising a greater weight. The advantage of this rapid movement of the hand, in protecting the person, in the use of the hammer and the axe, and in a thousand manual operations of constant recurrence, is unspeakable.

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* Perhaps it may be proper to remark, that these lectures were delivered to a manufacturing community, and these and other subsequent allusions are best understood by such a class. It was not thought necessary to omit or alter them.

But what must not be overlooked, is the circumstance that to every muscle which moves a bone, there is an antagonist which acts in a different direction. How is it possible that this can be accidental? For every flexor there is an extensor, for every abductor an adductor, and for a pronator a supinator. A single muscle only to every bone, would leave the human frame nearly as incapable of action as though it had none at all. There is a muscle to straighten the arm as well as to bend it, one to bring the head to its position after it has been turned, one to open the eye, as well as to shut it. Without this capability of antagonistic action in the different muscles, it would be impossible to stand, to walk, to eat, or, in fact, to maintain for any length of time our existence. It must also be noticed, that whenever, in obedience to the will, any particular muscle is called into action, its antagonist immediately relaxes, or the action of both might keep the limb at rest; a flexor and extensor yield as readily and certainly to each other's movement as the two scales of a balance, or as if they acted by mutual consent.

To perform all the requisite functions, a very large apparatus of muscles is necessary. Those by which voluntary motion is performed are four hundred and thirty-six. And is it not a most astonishing instance of contrivance, that all these should be so placed as not to interfere with each other's motions, and yet to occupy so small a space? They pass over and under each other, they cross each other; in some cases one passes through another, or they change the direction of their power, as by a loop or pulley, or, situated for convenience at a distance, they perform their office by means of a small cordage, where a large muscle could not conveniently act; as the tendons which move the toes, which are actually strapped down by ligaments at the instep, and run in a sheath beneath those fastenings higher up the leg, till they join the muscle. What could the most skilful contrivance have done more? Consider, then, the curious construction of these muscles, their number, their variety, their position, their adaptation, and their power; without which not a word could be spoken, nor a morsel of food chewed, nor a finger moved; and the exact arrangement by which they are all disposed, so as to act with the greatest advantage, and, without interference or disorder, to occupy so small a space; and can you hesitate to acknowledge a creating intelligence? A ship, with all its decks, and masts, and rigging, does not exhibit half the mechanical contrivance and ingenuity which the human frame displays; and what would you say of a man, who could suppose that "Nature" had framed this curious structure; meaning, that the various particles of matter which compose its hull and its rigging, had all, by the necessary laws of unconscious matter, arranged themselves into planks, and masts, and yards, and blocks of different kinds, and sails of various shapes and sizes, just fitted to their place, and ropes withal to work the vessel, so as to form a fine and gallant ship of war?

But how is all this apparatus of muscles, with their tendinous cords, to operate on the bony levers, so as to give them motion at the proper time, and in the right direction? In your mills the power is generated by steam, and by means of shafts and straps communicated to any part of the machinery, at what time and in what proportions and places the mind which governs all deems proper. In a ship, a presiding mind governs the whole arrangement. The word of command is given; and the halliards, the braces, the sheets, the tacks, the bowlines, are immediately put in motion by the crew. The sails are hoisted, or reefed, or taken in, in order to accelerate or retard the speed of the vessel, to the motion of which the rudder gives the intended direction. So, in the human structure, there is a presiding mind, to which all the machinery is subject; its volitions are the word of command, which is no sooner given, than one, two, or twenty muscles instantly exert their force, and, by their tendons, draw the bone in the required direction. And with what an admirable precision this is done! there is no mistake of the order given; a foot does not move instead of a hand; the arm is not depressed when the will commands its elevation, and motion is not continued when the order is given to stop. Not one of the four hundred and thirty-six voluntary muscles move without an order, and only just that one, or that number of muscles, which are needed; without any refusal to act or to be still, without any interference of one class with the movements of the other, and without a moment's delay, is obedience rendered. All this is performed by means of the nerves, which are supplied to every part of the human frame. We can trace all muscular motion to the nerves, and these to their common centre, the brain, or its continuance, the spinal marrow. If any of the nerves, communicating between the brain and any particular part, are severed, the power of motion and sensation is lost. But here we stop; a veil which we cannot penetrate is thrown over the rest—we come to something invisible; there is a mysterious power which operates on the sensorium, which communicates its volitions by what is termed the nervous influence, which is known only by its properties and effects, and which we call THE SOUL. How the mind's volition produces instantaneously the motion of a limb; how the commands of the will are propagated by means of the nerves, through many limbs and intervening parts of the system, to the extremities, to a foot, or a finger, and that with a rapidity equal to the passage of light, or the motion of the electric fluid, is equally beyond the comprehension of a philosopher and a child.

The nerves are cords of various size, proceeding from the brain and spinal marrow; the former supplying principally the organs of sense, the latter those of motion; they are given off in distinct pairs, and their ramifications extend over the entire corporeal structure. By them the commands of the will are transmitted to every muscle which is ordered into motion. And not only do they communicate the mind's pleasure to every part of its dominions,—they also convey information to a considerable extent of whatever passes in these realms, or without them, which affects its welfare. If there is any mischief going on in any portion of the system, if injury is received by cold or heat, obstructions or collisions, or by whatever may affect the well-being of any part, the nerves give notice to the mind, by the pain which is felt, and thus act like sentinels at their post, whose vigilance nothing can escape.

And besides this general intelligence, which it is the office of the nerves to give, there are some appropriated to peculiar functions, to give information of a specific kind. Some of these give the sensations of hardness, softness, smoothness, and others of a like kind; some have the charge of sounds, others of odors and tastes, and to others is assigned the office of conveying to the mind ideas of form and color. These are the means by which the mind carries on its intercourse with the external world, and holds correspondence with other living creatures. Can we, then, from even this brief and cursory glance at the nervous system, which has not noticed a thousandth part of its wonders, resist the impression that mind had been employed in its construction? Could such a telegraphic communication have been established between the brain and every part of the system, by which a correspondence is maintained, not only with every muscle, but with every fibre, by mere chance? Could so complete a system of guardianship be constituted over every part of the frame by the "necessary laws" of matter? Could such a mode of correspondence with external objects be accidental? What is not the mind capable of believing, that can believe this?

We often see very delicate machinery, or what is liable to injury from exposure to the air, or contact with other bodies, inclosed in a case; and thus it is with the human body. The muscles and nerves, and the various vessels, are of a texture too delicate to admit either of such exposure or contact; they are placed, therefore, in a suitable covering. First, every hollow is filled up, and every inequality rendered smooth, by the cellular texture, which is the general medium of connection between the different parts of the body, and which contains an adipose substance, which allows of their gliding smoothly over each other in performing their respective functions. Over the whole is drawn the skin; the inner part of which is the cutis, or true skin, full of an immense number of small vessels, containing numerous papillæ, and being spread over with innumerable nervous filaments: this is the seat of the organ of touch, and is exquisitely sensible. Above this lies the mucous membrane, forming the coloring matter of the skin. Over all is spread a fine scarf skin, full of pores, of a thin transparent substance, capable of being easily renewed if it receive an injury, covering and protecting the extremely sensible true skin, itself not possessing sensibility. In this case, which envelopes the human frame, we see many objects accomplished. The muscles, with the vessels which accompany them, have a covering of the most pliant and flexible kind, so as to admit of every motion which the body requires; this covering forms the station where all the nerves take their post, to communicate to the brain intelligence of what happens on the surface of the body: it has also a delicate and transparent veil, which, while it protects what is beneath, itself suffers no pain, and which, where from pressure, such as in the palms of the hands and at the soles of the feet, it is more liable to be worn out, is thicker than at the other parts of the surface. Do not these things look very much like studied or designed arrangements?

We have now given a brief sketch of the building of the human frame, and the provisions made for the working of its machinery. Before we quit this part of the subject, there is one view of the case, to which I wish especially to call your attention, and that is the very evident adaptation, not only of the several parts to each other, but of the several systems of parts, so as to produce one object. In the frame-work of the structure, we have seen not only an excellent selection of material, its division into a vast number of parts, all exactly adjusted to each other, so as to protect all that is vital and important, and to admit of movements without number, and the joints in which these levers work, so constructed, and so supplied with a mucilage as to prevent friction; we have not only seen millions of millions of fibres, so laid together and disposed as to give to each muscle the collective strength of the whole, and these furnished with tendinous cords to fix them to their proper levers, and to work either near or at a distance; we have not only seen a system of nerves, in connection with the sensorium, spreading themselves through every part of the human frame, giving notice to every distinct fibre when to act and when to rest, and keeping open a communication between the mind within and the world without; but we also have seen that the system of bones was evidently intended to be worked by a system of muscles, and that the system of muscles was as obviously made to work the bones, and that the system of nerves was plainly made with reference both to bones and muscles. Each of these systems is very complicated, and each complete in itself; and yet, without the combination of the three systems, the human structure would have been incapable of action. If it could, by any possibility, be supposed that random chance or blind necessity could have arranged either one of these beautiful and complex systems, the probability that two other systems, of equal beauty, and order, and adaptation, should, in the same way and at the same time, be formed, and combined with it, is, beyond all calculation, so completely against such supposition, that, in any other case, the man who should assign such effects to such causes, would not be considered sane.

We shall now pass on to another interesting view of the human frame, and consider the means by which it is preserved in strength and vigor, for a number of years together. This will furnish us, if I mistake not, with additional proofs, and those of the most striking kind, of intelligence and design in the marvellous construction and working of the various apparatus which combine to form the human frame. In unorganized masses, such as rocks, or minerals, the same particles may remain for ages; but there is this remarkable peculiarity of organized bodies, whether of the vegetable or animal kingdom, that the particles which compose them are never stationary, and the bodies themselves are constantly the subjects of change. At no two moments of our lives do our bodies contain exactly the same identical particles. There is a constant motion, a perpetual waste. No part of the human frame, however solid, is exempt from this. Every bone, every muscle, every nerve, every gland, is constantly wasting. Whether the particles of matter which have passed into the composition of an animal body, are incapable of sustaining the vital action beyond a given time, or whether it be a law of that mysterious state of being which we call life,—whatever be the cause, the fact is ascertained; by organs adapted to the express purpose, the refuse of organization is continually thrown off from the human frame, and poured into the common reservoir of matter, the great storehouse of nature. How, then, is this piece of wonderful mechanism repaired and kept in order? How is all its waste of wear and tear supplied? If it is every moment losing a portion of its substance, which is become unfit to be retained in the system any longer, how is it so renewed as to keep up its bulk, and form, and strength? If, in any of your machinery, after you have taken all due precaution for its preservation, by constructing it of proper materials, diminishing the friction, and guarding against accident, a part wears out by constant use, you have no means of keeping the machine in proper action but by supplying a new wheel, or piston, or lever, or adding a new part in place of that which has been rendered unfit for use. But this is a poor contrivance, compared with the admirable expedient which is adopted to supply the waste of the human machine. It is by the introduction of new matter from the world without us, in such a manner and in such portions as are necessary, and by the most astonishing contrivances for the distribution of this new matter, through every part of the human frame, and to every point where decay renders renovation requisite. This is a process at once so wonderful, and so much to our purpose, that we must beg your attention to a few particulars connected with this interesting subject.

We have already noticed that the supply, to recruit this continued waste, must be procured from without.

The world in which we live is the great storehouse from which all the materials are drawn. All the innumerable and diversified particles of matter, that have built up every animal frame, and constructed every vegetable since the commencement of their respective kinds, have been derived from this great repository; and while the generations of every living thing have successively perished, here are still in being the same numerical particles; all the changes and combinations of the numerous bodies which have existed in the mineral, vegetable, and animal kingdoms, have not destroyed a single atom, nor added one to the original stock. It is not, however, from the earth directly that the human body receives its nutrition, but from substances already organized; from seeds, fruits, herbage, and the flesh of birds, beasts, and fishes. But it is remarkable that, though organized bodies afford the requisite nutrition, their organization must be destroyed, a complete decomposition take place, and new combinations formed, before the particles which composed them are competent to take their station in the human frame. As this structure is composed of very different materials, portions of matter corresponding with each must be furnished; there must be particles of a peculiar kind for the bones, muscles, fat, skin, hair, nails, and many other parts. The various materials for renovating all these constituents of our frame are found in our food; but with the discoveries of modern chemistry, and its most refined and elaborate processes, there is no possibility of extracting these substances from what we take as the elements of nutrition. It is by a chemistry infinitely more refined than human skill can boast, that this is constantly, and with the greatest facility and certainty, accomplished.

The first stage of this curious and necessary process consists in grinding down the material of nutrition, and reducing it into a pulp. I cannot conceive how any one can attentively consider the mechanism of the mouth alone, without recognizing a Divine Intelligence, in forming this apparatus and adapting it to its end. First, look at the teeth: can any thing be imagined more suitable to the purpose? Their position is just where they are needed; in the very aperture by which the food is received and the process commenced. Their relative situation, and size, and office, also look much like design. Several teeth, sharp and cutting, are placed in the front of the mouth, to separate a portion for mastication; then a number of others, broad and strong, called, from their office, "the grinders," placed just where the jaw has most power of comminution. One jaw only would be useless; there are therefore a pair, acting like the blades of a pair of shears, or the upper and nether mill-stones. The cutting and the grinding teeth are ranged just opposite each other. Take notice how hard they are, and how firmly fixed, so as to work for a long course of years. Look at the beautiful enamel which covers them, and which is peculiar to the teeth. Why should all the bones, besides, be covered with a membrane, but these with a substance so hard as to strike fire with steel? In every one of these particulars is there not the most evident design, and that of a highly beneficial character? But all this provision would be useless, without the means of moving the jaws in several directions. These means, however, are not wanting; the jaws are capable of six different movements, upwards and downwards, forwards and backwards, right and left, by means of muscles attached to them for that purpose; some of them working in a very curious way, and several acting in every motion of the jaws. By the movements of which the tongue is capable, the food is placed in different positions, to facilitate the process of mastication. But moisture is necessary; and moisture is provided. About the jaws and tongue there are many glands placed, the office of which is to secrete a fluid; by the action of chewing, this moisture exudes, and, mixing with the food, assists the working of the jaws and tongue, in bringing it into a condition fit for the stomach. Now, I ask, whether there is any mill for grinding corn, or malt, or any other substance, that is constructed with an ingenuity equal to that which the apparatus of the mouth displays in this process? And if we admit intelligence, acting with reference to an end in the less, by what rule of reasoning ought we to exclude it from the greater?

The apparatus for conveying the food to the stomach is not less appropriate and ingenious. The mechanism of the many muscles employed, the elasticity of the tube, called the æsophagus, through which it passes, the lubricated state in which this tube is kept by a liquid secreted for that purpose, and its action in forcing the food towards its destined receptacle, are all most curious processes, on which we cannot stop to particularize. We must, however, notice one instance of most exquisite contrivance. At the lower and back part of the head, behind the tongue, is a funnel-shaped bag, called the pharynx, the wide part opening towards the mouth, the pipe being the æsophagus, which leads down into the stomach. Into the upper and anterior portion of this bag, two holes open, by which the air passes from the nostrils, through another tube called the trachea, or windpipe, into the lungs. Into the same bag the food also enters, in order to pass by the æsophagus into the stomach. But, as the trachea is placed in front of the æsophagus, is there not great danger of the food passing into the lungs, and fatally obstructing their important function? This danger was evidently foreseen and obviated. In the very act of swallowing, a cartilaginous valve, called the epiglottis, closes the aperture of the windpipe securely, so that the food passes easily and safely into the passage which conveys it to the stomach. But for this valve, death would be certain, either through inanition, if, aware of the danger, we abstained from food, or by instant suffocation, if we attempted to swallow. Without this valve, the new-born infant would perish at its mother's breast;—without this valve, the first morsel that the first man endeavored to swallow, would have terminated at once his being and his race. Has any contrivance, resulting from foresight and human intelligence, ever exhibited precaution with more distinctness and effect? Who can forbear exclaiming with devout admiration, "the finger of God is here."

By the act of deglutition, the food so far prepared is conveyed through the æsophagus into the stomach. Here it undergoes another important process. Besides the muscular action, to which every part of the solid food taken into the stomach is successively exposed, by being brought into contact with its surface, there is in this organ a fluid secreted, of a most peculiar nature, which from its situation is called the gastric juice. This, it is found by experiments, is, in different animals, adapted to the kind of food on which they respectively live, —whether vegetable or animal, or both. No chemistry can form any thing like this extraordinary liquid. It is apparently the mildest of all fluids; and yet its power as a solvent is unequalled. In the human stomach it acts on vegetable and animal matter deprived of vitality, in a manner which is truly astonishing; and yet, on the living fibre, and, consequently, on the coats of the stomach, which, during life, contains it, it has no power. Did a chemist ever contrive a solvent with more evident adaptation to the substance to which it should be applied, and at the same time with a nicer adjustment, so that it should accomplish no incidental mischief, but effect the intended good, and that alone? The food is thus converted into a pulpy liquid, called chyme. But the necessary process is not completed; the substance, thus far prepared, has to pass into a kind of second stomach, called the duodenum, the entrance to which is termed the pylorus. "Nothing in the animal economy is more curious and wonderful, than the action of that class of organs of which the pylorus affords a remarkable example. If a portion of undigested food presents itself at this door of the stomach, it is not only not permitted to pass, but the door is closed against it with additional firmness; or, in other words, the muscular fibres of the pylorus, instead of relaxing, contract with more than ordinary force. In certain cases, or where the digestion is morbidly slow, or when very indigestible food has been taken, the mass is carried to the pylorus before it has been duly acted on by the gastric juice; then, instead of inducing the pylorus to relax, in order to allow of its transmission to the duodenum, it causes it to contract with so much violence as to produce pain, while the food thus retained in the stomach longer than natural, disorders the organ; and if the digestion cannot ultimately be performed, that disorder goes on increasing until vomiting is excited, by which means the load that oppressed it is expelled. The pylorus is a guardian placed between the first and the second stomach, in order to prevent any substance from passing from the former until it is in a condition to be acted on by the latter; and so faithfully does this guardian perform its office, that it will often, as we have seen, force the stomach to reject the offending matter by vomiting, rather than allow it to pass in an unfit state; whereas, when chyme, duly prepared, presents itself, it readily opens a passage for it into the duodenum."* How serious would have been the mischief resulting to the whole frame, if some such expedient had not prevented the too early transference of the contents of the stomach to its next stage? On this our health and strength in a great measure depend. And can it be believed, that so necessary and beneficial an arrangement is the result of accident and undesigning necessity? Is not the wisdom that built the human frame apparent here?

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* Library of Useful Knowledge.—ANIMAL PHYSIOLOGY, p. 41.

But the process goes on; and as the substance now called chyme moves forward, it receives other changes from peculiar fluids, secreted just in the proper place, and applied just at the proper time; the principal of which appears to be the bile, prepared by the liver, and exuded by a duct, so as to mix with the chyme in the duodenum. Another change is the consequence of this; its purest portions then separate into chyle, a cream-like liquor, which, passing slowly along the intestines, gradually disappears, being absorbed by the lacteals, an innumerable quantity of hair-like vessels, which, uniting, pass, by a circuitous route, into the thoracic duct, the contents of which are poured into a large vein communicating with the heart. The chyle thus mixes with the blood, and is then prepared for circulating through the system. How truly admirable are those processes; how wonderful and complicated the apparatus; how exact all the arrangements by which the food we eat, whether vegetable or animal, seeds or fruits, is converted into that vital fluid which ministers nutrition to the whole system, and supplies its constant waste! What chemical laboratory, with its furnaces, and crucibles, and alembics, all in full action, can give stronger proofs of intelligence and design?

But we must notice, in the next place, though with a far greater attention to brevity than the subject deserves, the manner in which the preparation thus formed is distributed through the system. The whole circulation of the blood depends on the heart. Centrally situated in those domains, every part of which it is to supply with aliment, and that without intermission, it is well secured as within the walls of a citadel, and is furnished with a case which protects it, keeps it lubricated, and affords room for its constant play. The heart is a strong muscle, of a very peculiar kind, constructed with the most obvious design of performing the important function assigned to it. It is a kind of double organ, consisting of two parts and sets of apparatus, which perform distinct offices. These two parts, however, are not like the pairs of organs and limbs which we possess, such as two eyes, two ears, and two hands, each one of which is completely independent of the other, and capable of performing separately the full office of that organ or limb. But, though it appears possible that the right and left portions of this organ might have acted separately, yet both are absolutely necessary, and their union probably gives strength to the structure and power to its movement. Each portion of the heart is furnished with two cavities, an auricle and ventricle; and each portion has a large artery and vein communicating with it. Each part also superintends a circulation of its own. To the right, is assigned the circulation of the whole mass of blood through the lungs; and to the left, its distribution through all the other parts of the body. The venous blood, which, after circulating through the system, becomes of a dark purplish color, and is incapable of supporting life, enters the right portion of the heart by the vena cava, and is sent through the lungs by the pulmonic artery; the purified stream passes into the left portion of the heart by the pulmonic veins, and is propelled through the aorta, and thence by the smaller arteries through the whole system. The proofs of a surpassing wisdom, in the construction and functions of the heart, are many and striking; we can only glance at a few.

How can it be imagined, that the peculiar irritability of the heart, and its alternate contraction and dilatation, can be an accidental thing? Without these functions, life could not be carried on; and these peculiarities no other muscle possesses. As the blood enters, the right auricle of the heart expands, by its peculiar sensibility to the presence of this fluid it contracts, and propels it into the right ventricle; as the auricle contracts, the ventricle enlarges, and, excited in its turn by a sudden stroke, it sends its contents through the pulmonic artery into the lungs. On the left side, a similar process goes on with the blood received from the lungs and driven through the aorta. Who can bring himself to believe that, by any accidental concurrence of various particles of matter, by any "affinities" or "analogies," such an organ should be formed, with parts so distinct yet united, and endowed with a power of alternately contracting and expanding, so remarkable yet so necessary, performing its motions with such a regularity and constancy, for so many years, day and night, by its own power of action, altogether independent of our will? Why should it have auricles and ventricles, each moving in its own due time? Why should the arteries and veins be so placed, as to keep the venous and arterial blood in separate chambers? Why should this muscle only have just such power,—and why should its action, a very short suspension of which would be fatal, be rendered, differently from the greater part of the muscles, independent of the will? How can we, without shutting our eyes, fail to perceive those distinct marks of benevolent design which all this exhibits?

And how wisely is the venous blood prevented from mixture with the arterial, when both are in the same organ, and that at the same time? The most injurious consequences would ensue, if they were not kept distinct. The cavities which are the receptacles of this fluid, in its two different conditions are separated by a fleshy wall, which allows of no communication.* No two liquids, the mixure of which is undesirable, are ever kept separate with more evident design and care.

What is a more evident proof of contrivance and design, than when vapor or fluid is intended to pass in one direction only, a valve is so placed as to permit its course freely in this direction, and to close and effectually prevent its return? You are familiar with such constructions; you know, by daily experience, that the utility of such an invention is quite equal to its ingenuity; you are aware that the whole working of many an important piece of machinery depends on a valve. And was there not one also, who knew that all the machinery of life depended on the position and efficient working of a valve? In almost all the vessels which convey a liquid to any part of the human frame, this expedient may be found; in the veins, the lacteals, and lymphatics; but there are none, the office of which is more important, and in which the precaution of intelligence is more impressively exhibited, than in the valves of the heart. When the dark venous blood has reached the right ventricle of the heart, and this by a sudden contraction empties itself into the pulmonic artery, to send it to the lungs, what is to prevent its expelling a large portion of it into the auricle from which it received it? Here a valve is placed, called, from its shape, the tricuspid valve, fastened, most curiously and strongly, by fine tendons, to the sides of the heart. No sooner is the blood forced from the ventricle than it drives back the valve and closes this passage, and the only way by which this vital stream can go, is the right way; it then proceeds without obstruction through the artery to the lungs. But here occurs another difficulty to be provided for; as soon as the propelling action of the right ventricle ceases, the pulmonic artery, which has received the blood, acts in such a manner to assist in its propulsion, as would, if no provision had been made, force much of it back into the ventricle: here another set of valves suddenly rise, and forbid a retrograde movement, and the blood proceeds at once into the lungs. Similar results are produced by the mitral valve of the left side of the heart, and the sygmoid valves of the aorta. I ask, with confidence, if there is any construction of human contrivance and ingenuity more evidently precautionary and select, or which more demonstrably proves that a wise and benevolent intelligence has been employed?

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* A case is mentioned by Richerand, of very singular conformation of the heart, in which the blood was allowed to pass from the left to the right ventricle, as it was found on dissection. By another peculiarity, the impure blood was not transmitted to the brain, so as to disturb its vital excitement; but the patient, when brought to the hospital, "was remarkable for the lividity of his complexion, the turgescence of the vessels of the conjunctiva, and the thickness of his lips, which, like the rest of his face, were of a dark color, his respiration was laborious, his pulse irregular, he could not utter two words in succession, without taking breath; and was obliged to sleep in a sitting posture."—Richerand's Physiology, pp. 151, 152, ed. 3d.

It only remains that we take a cursory glance at the pipes or vessels, by which this life-maintaining fluid is circulated through the system. The arteries are employed in conveying it from the heart. These vessels are composed of a substance, which is not only proportioned to the strength which is requisite, but which possesses also an elastic and muscular power to assist in propelling the blood. When the first stroke of the blood is felt in them, they expand: this is followed by a re-action, which, by its contraction, assists the progress of the blood. First, the main pipe, the aorta, is single and large; in its ascent it throws out branches to all the upper parts of the body, and, descending, its ramifications proceed in a similar way, multiplying in every direction, till they become too minute for observation. In the arterial system, the following, among others, appear obvious instances of intention. A branch is provided for every part of the body. Not a speck of bone, not an atom of flesh, not a single point in all the interior, or in the whole surface of the body, is neglected. If from any one part, from a finger, an eye, a tooth, the requisite supply were withheld, it would become diseased and perish. Could a reckless chance, or undesigning necessity, have been so provident? It might happen that some of these slender tubes, by the constant play of the muscles, or by some violent effort, might suffer injury; what, then, would become of the part which it should supply? What power, but that of the great Architect, would have thought of causing these pipes, in their course, frequently to inosculate, and to separate again, so that if the pipe which belongs to any one part should be injured or destroyed, it might be supplied by another? And does not the manner in which these tubes are laid throughout the system, show a most provident care? If any of the large arteries should be injured by external violence, death would presently ensue; they are therefore laid, in general, much deeper than the veins, out of the reach of common accidents, guarded frequently by a depth of flesh, or a ridge of bone.

A similar arrangement, in most respects, exists for the return of blood to the heart, in just an inverted manner. At the extremities, these vessels first begin to appear, in ramifications of exceedingly small filaments; they unite as they proceed, bringing back all that portion of the blood which was not required for immediate use, or which is now become disqualified for a place in the system without further purification, entering again by the venæ cavæ into the right auricle of the heart. Now, can any man believe, that it was all a matter of chance that the blood, when no longer capable of supporting life, should find its way from every extremity, upper and lower, to the heart, and precisely to that part of the heart which is furnished with an apparatus for throwing the blood into the lungs? And that valves arose accidentally in the veins, to admit the course of the stream only in the right direction?

How peculiar must be the construction of that mind, or, rather, under what strange influence must it act, that sees in the whole process of nutrition no benevolent intelligence, nothing but unconscious physical causes in operation! That there should be a mouth, with all its appropriate furniture, as an apparatus to receive and prepare the matter from without, a tube to convey it just to that place, and no further, where another process must be carried on;—that there should be a stomach to receive it, with its mechanical, and chemical, and vital functions;—that there should be a kind of second stomach, followed by intestines, and myriads of small vessels, ready to absorb the milky fluid as it passes slowly on;—that there should be a double heart, one part of it for blood which is to be prepared for circulation, the other for that which is prepared, provided with a system of arteries and veins;—that all these organs should exist in just such an order, and possess just the properties which their relative position in the nutritive system requires;—that fluids, the composition of which no art can imitate, and without which the frame could not be supported—fluids, too, so very dissimilar, secreted from the same blood—should be found prepared and placed just where their action is requisite, such as the gastric juice in the stomach, and the bile in the liver, which in any other order would defeat all the purposes of nutrition;—that in every point where danger or serious inconvenience was likely to occur, there should be an effective provision to meet it, such as the epiglottis to render the act of swallowing safe, the pylorus which guards the passage from the stomach to the duodenum, and the valves of the heart and its arteries;—that all this should have been the result of mere accident, requires, certainly, a most enormous stretch of credulity to believe.

There is one more view which we beg to be allowed to take, before we close this part of our subject; and that is, the degree of dependence which the working of this very curious machinery has on the will. As the subsistence of man, and all his intercourse with others, were to depend on his own voluntary efforts, it was necessary that such an extent of muscular action should be placed at his command, as was requisite to all the motions which are necessary to such a mode of living. We have seen that this is exactly the case: the will has command over four hundred and thirty-six distinct muscles, and the number of movements thus under its control is incalculable. But even here too much is not left to the mind. Instantaneous as the movement of a limb appears with the volition which produces it, there are many processes which it includes. First, as far as we can perceive, there is an action of the brain: this is propagated in some mysterious manner, along the whole course of the nerve towards the part to be moved; it is communicated to every fibre of the muscle to be employed, that all may act in concert; then the muscle swells and contracts, and the tendon acting at its extremity moves the part in the required direction. But this is not all; at the very same instant, the antagonist muscle must have information to relax and yield to the opposite movement. In speaking, eating, walking, many muscles are brought into play at the same moment, and as many yield, in just the proper time. How could the mind, unless it had been very different from what it is, have been capable, consistently with that attention which outward objects demand, of instantly perceiving and determining on which nerves to act, so that only the proper muscle should be contracted? How could it have been capable of managing all the details of this complex machinery, including so many nerves, and muscles, and bones? How few, comparatively, know any thing of the internal economy of the human frame, and yet how completely all can manage its machinery. When would an infant be capable of walking, of talking, or of any one voluntary action, if the whole working of the system were left to the mind? But how wise and gracious is, evidently, the arrangement which leaves to the mind only the volition; and that one simple act, in a most marvellous and mysterious manner, like touching a spring, instantly sets the machine in motion, in precisely the way intended. Is there not wisdom displayed, both in what is entrusted to the will, and what acts, not directly in obedience to it, but in dependent subordination to that part, whatever it be, which receives the first impulse of the mind?

There appears, also, to be equal design in the way in which another muscular apparatus acts, which is but in a small degree dependent on the will; that which is concerned in respiration. This must go on, whatever we are doing; it is a vital function, which cannot be long suspended. However we may be engaged with the head or the hands, asleep or awake, the lungs must perform their office. If the whole economy had been merely a matter of chance, why should the diaphragm and the muscles of the chest work on continually, without being set in motion or continued in action by the will, any more than those of the arm or head? But still there are many occasions when it is necessary, and perhaps even essential, to the safety of the body, that the will should have some command over the important function of respiration. If this were not the case, if the muscles concerned in breathing were as independent of the will as some others in the human frame, the voice would be materially affected, no sound could be prolonged, no additional effort could be made to detect an odor; obstructions could not easily be removed from the organ of smell, or expelled from the throat; a stream of polluting and noxious air could not, by a temporary suspension of the breath, be prevented from entering the lungs; and if, by any accident, the head should be immersed in a fluid, instant suffocation would ensue. Does not this look like a provision against accidents, the probable occurrence of which was foreseen? How can it be explained on any supposition, besides that of intelligence and design, how, if the muscles of respiration were made capable of involuntary action, they should be in any case subject to the will, or how, if the will had any command, it had not the entire direction as in other cases? Do we not see wisdom in the rule, and no less wisdom in the exception? Does chance or necessity ever make such intelligent distinctions?

But some of the most important of the vital functions are quite involuntary, and it is well they are. When we have once committed the food to the stomach, we have nothing more to do with the many exquisite processes which are still necessary to prepare it, or any selected portions of it, for entering into the composition of our bodies. Neither the nervous influence, nor the muscular action, nor the gastric juice of the stomach, is at our command; the pylorus does not wait our bidding; the pancreas and the liver prepare their respective fluids in a manner surpassing all art, without our knowledge or consent; the orifices of the lacteals know nothing of our volitions; the auricles and ventricles of the heart do not perform their alternate contractions according to the mind's regulation. Now there is reason for all this; the cessation of these functions, night or day, but for a few minutes, would be fatal to the whole system. How, then, is it possible not to discern the traces of a designing wisdom in these accurate and eminently beneficial adjustments, in the power which is given, and in the limits which are set, to the volitions of the mind in working the corporeal machinery? Where power lodged with the will is useful or necessary, this arrangement obtains; where negligence or inattention would be fatal, it is taken from the will, and lodged where it will be exercised with the greatest certainty. In what way can human intelligence be employed, in the selection of suitable agents, and in assigning to each his proper office, and exact extent of action, that shall more decisively indicate the choice and the precautions of wisdom?

Here then we pause, and conclude our views of the PHYSICAL STRUCTURE OF MAN, except what more especially refers to his RELATION TO THE EXTERNAL

WORLD, which will engage our attention in the next lecture. In the commencement of this discourse, we laid down a position which few, we imagine, will think of disputing, that "if cases of manifest intention and design could be adduced, there must have been an intelligent Mind to form the intention, and to accomplish the designed end." We proposed, therefore, to inquire whether any clear indications of intelligence and design could be found in the human structure. I now ask, with confidence, whether we have not produced such instances? We have, indeed, noticed but a few, in comparison of what might have been brought forward, and on these we have but briefly glanced; but they are such as are, I trust, sufficient to produce conviction in the candid and inquiring mind. We have taken a view of three distinct systems in the construction of the human frame, that of the bones, the muscles, and the nerves; each system containing a separate mechanism of the most curious kind, and evidently adapted to the performance of its peculiar office, each complete in itself, but each useless without the others, and all combined as a whole to accomplish one end. We have also noticed some of the many elaborate processes by which the frame is renovated, by the introduction of new matter from without; and have seen in the apparatus of the mouth, the stomach, the intestines, the heart with its arteries and veins, the same exhibition of many separate and distinct parts, some of them of very complicated structure, all working to one end, as if each were endued with intelligence. We have noticed, also, the very manifest selections of forethought and wisdom in those parts and processes which are under the direction of the will, and those which are not; and here we close this part of our case. And now I appeal to reason,—to candor,—to justice, whether the witnesses which I have produced, many and various as they have been, have not borne testimony, the most ample and decisive, in proof of the existence of a Divine Intelligence?

With the exquisite machinery of the human frame before us, in the great complexity of its parts, and the beautiful harmony of its working, with the number and variety of its striking adaptations, beneficial arrangements, and necessary precautions, how unsatisfactory, how unmeaning, how frivolous is the language of the atheistic philosophy. "If again it be asked what origin we give to beings of the human species?—We reply, that, like all other beings, *man is a production of nature.*"* There is an ambiguity in this expression, which may prevent the whole absurdity of such a proposition from being instantly perceived. "Nature" is a term so often employed by those who believe in a Supreme Being, as a personification of the divine agency, that many may feel much less shocked by such an annunciation, than they would, were it not for such an ambiguity. The atheist means by it matter—nothing else; he says that mere unconscious, unintelligent matter, by its own powers and properties, made man what he is! That is, that not one of the innumerable indications of contrivance and precaution which the human frame presents, is the result of design. It is all just as it happened. It was not intended that the bones should support the body, nor that the joints should admit of motion, nor that the synovial secretion should, by lubricating them, prevent their friction, nor that the muscles should move the bones, nor that the nerves should set the muscles in action; it was not designed that the teeth should chew, nor that the œsophagus should convey food to the stomach, nor that a kind of valve should cover the larynx, to prevent suffocation every time we swallow; it was not intended that the gastric juice should have any thing to do with digestion, nor the liver with the formation of chyle; it was not intended, notwithstanding all the mechanism of the heart, that it should have any thing to do with the blood, that it should beat, or by its partition, separate the venous from the arterial blood, nor that the arteries and veins should have any share in the circulation of the blood! All this, and a thousand things as contradictory, atheism means by saying, that "man is a production of nature;" that is, that all the exquisite and complicated machinery of his frame, came together in just such positions and combinations accidentally! Is this an explanation? Is it not the utterance of an absurdity at which reason revolts? To what purpose is it to introduce "necessity," to tell us of "the necessary laws of nature?" Does it account for any thing to say, that it is so because it necessarily is so? Does not the very necessity to which atheism ascribes the arrangement and formation of all things, suppose that every effect must have a cause appropriate to the kind of effect produced, and adequate to its production? "Necessity," it says, "is the constant and infallible connection of causes with their effects." * "There can be no effect without a cause." † But what cause can be assigned for the effects which we have instanced, that does not include the agency of an Intelligent Being? There are no properties of matter to which systematic arrangement, provisions of a precautionary nature, and adaptation of means to the accomplishment of an end, can be assigned. It would be as reasonable to talk of building a house by syllogisms, or clearing a forest without any physical effort, by the sole agency of metaphysics. For such effects as those which the physical structure of man exhibits, there is no cause appropriate, there is no cause that can possibly be adequate, that does not possess knowledge, foresight, and wisdom.

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* System of Nature.—Vol. I. p. 139.

I appeal therefore to you, among my sceptical hearers, who profess to be inquirers after truth; to all of you who are not determined to see no evidence, however clear, which makes against your present opinions, and to resist proof, however strong and palpable, which does not favor your unbelief;—I appeal to you, whether you can bring yourselves to believe that a number of particles of matter, at some certain time should have so arranged themselves, or been brought together by any "analogies," "affinities," or "aptitude to attraction," as to produce the arrangement of bones, and muscles, and nerves, and at the same time all the digestive and circulating apparatus, so that the teeth, the throat, the stomach, the liver, the pylorus, the duodenum, the lac-

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* System of Nature.—Vol. I. p. 89.

† Vol. I. p. 88.

teals, the thoracic duct, the two-fold heart, with its valves and arteries, and veins, and ten thousand nice and necessary adjustments, should have been made, all just of the right kind, and in the right place, so as to form a living human body?—and, moreover, that just at the same time and place, another set of particles, ignorant of what their fellows had done, set about a similar work, and made another human body as complete, except that it was a female, a "help meet" for man?—and that they were not, at least one of them, produced in the first stage of infancy, but at that degree of maturity which enabled them at once to provide for themselves? I cannot forbear saying that it appears to me that the man who can believe all this, can believe any thing which a system requires; and that there is no fable of pagan mythology, no delusion of the Arabian impostor, no legend of the dark ages of popery, no extravagance of modern fanaticism, that can surpass the absurdity of such a belief.

Let, then, the humble Christian rejoice, whose opportunities of learning have been few, who may have but small acquaintance with science, who is not qualified to enter into the subtleties of endless disputation, that there are proofs of the existence of a Supreme Being, to which he can always have access. He needs not an acquaintance with the rules of logic, or the abstractions of metaphysics: let him place his hand on the beating of his heart, let him bend a finger or move a foot, and ask the bold denier of his Maker to give a satisfactory account of the first origin of such surprising mechanism. In every sense, in every limb, in every motion, let him behold, with adoring gratitude, the visible and constant proofs of the existence of his Father and his God.

And, finally, how well adapted is the view which we have taken of the human frame, to encourage the meek and lowly in heart, when oppressed with a sense of the greatness of the Divine Majesty, and of their own comparative insignificance. He who has formed worlds, and suns, and systems, whose "greatness is unsearchable," and "his ways past finding out," has employed the same power and wisdom in the construction of every part of your frame. Can he that formed you, be unmindful of you? If you are the product of his power, can you be beneath his notice? Are not all the benevolent provisions, and beautiful arrangements, and methods taken to ward off danger, and to minister to your comfort, proofs of his care? "Cast," therefore, "all your care on him who careth for you." He, whose ineffable glories dazzle the seraphim of heaven, and awe the loftiest spirits of the celestial world, has shown his kindness and his care in every nerve, in every muscle, in every joint of your mortal frame, and cannot, after so much wisdom and power, displayed in your formation, forget you, or disdain to notice you. If he frown, it is on the proud and the haughty, and "the wicked, who forget God." Be assured, and triumph in the assurance, that "the High and Holy One, who inhabits eternity," ever dwells "with the humble and the contrite in heart."

LECTURE IV.

PROOFS OF THE EXISTENCE OF GOD, FROM THE WORKS OF NATURE, CONTINUED.—OBJECTIONS ANSWERED.

PSALM CIV. 24.—"O LORD, HOW MANIFOLD ARE THY WORKS! IN WISDOM HAST THOU MADE THEM ALL."

THE subject of this psalm is the Creator and his works. On these topics its pious author expatiates with much feeling, and at some length. Taking this sacred ode merely as a literary composition, it possesses excellencies of the highest order, which none who have a taste for the beauties of nature, can read without satisfaction and pleasure. The psalmist speaks of the invisible Jehovah in figures borrowed from some of the most splendid and magnificent of his works. His "garment" is the "light" of heaven, his "chariot" is "the clouds," his going forth is on the "wings of the wind," the tempest and the lightning are the messengers of his will. He is the divine architect who built the earth, and made its foundations sure, "that it should not be moved;" who stretched out the heavens as a canopy, who covered the earth with the ocean as a robe, and gave to the sea its bounds, "that it should not pass over." This glorious being the psalmist contemplates as presiding over the whole economy of nature, pervading it by his presence, upholding it by his power, and, by his unremitted energy, producing all its diversified appearances. He hears him in the roar of the thunder, and the whisper of the breeze; he sees him in all the beauties and the splendors of creation. It is he who pours out the sea, waters the earth with its exhalations, bids springs rise in the valley, and sends forth their streams for the fowls of the heavens, and the beasts of the field. The inhabitants of the air, the earth, and the ocean, are dependent on his care; all the productions of the globe are the gifts of his bounty; the luminaries of heaven are the appointments of his mercy. It is after a brief survey of the benevolence and wisdom which nature exhibits, that he exclaims, "O Lord, how manifold are thy works; in wisdom hast thou made them all; the earth is full of thy riches." *

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* Such is the God of the bible, the God of all the pious Jews of old, and of all devout Christians in the present day. "To whom, then, will ye liken God? Or what likeness will ye compare unto him?" asks the prophet. There is no object in nature that can resemble him, since he is the only Creator, and all other beings are creatures; he only is infinite, all others are finite.

It is from these works that we derive the argument of this and the preceding lecture, for the existence of an intelligent Creator; they are such as can be assigned to no other cause. Our object is to prove that there are such manifestations of mind in the works of nature, as cannot be attributed to mere physical causes, as compel us, by the soundest deductions of reason, to believe in the existence of an Almighty Being, distinct from

He is the one eternal, self-existent, immutable being, who "fills heaven and earth." To speak of his glory and majesty we must employ terms, make use of figures and resemblances, taken from the works of his hands. Now, what would any reasonable man think of a person, who should select some part of a figurative representation, employed in one place, and part of a metaphysical description in another place, who thus should take several parts from several distinct places of the Scripture, in which the Divine Being is spoken of in figurative language, and putting together, literally, these detached and incongruous parts of different metaphors, should make a monster of his own imagination, get it engraved, and writing under it, "The God of the Jews and Christians, the Great Jehovah, or the Trinity in Unity," should exhibit and circulate it as the means of support to an atheistic creed?—Would not every man, possessed of the least glimmer of reason, or making any pretensions to integrity, think such dishonesty, such palpable falsehood, such shameless absurdity, equalled only by its profaneness, too glaring to catch the most simple, too dishonorable to be tolerated, even by the most confirmed and inveterate opposer of Christianity? Yet this has been done, and the profane caricature set in the windows of a most public place in the metropolis, to gain attention; it has, also, found its way to Bradford, and, I doubt not, to many other places. Now, is there one of my fellow-townsmen, whatever be his creed, is there a man living, who has any sense of reason and justice, who would not blush for a man, who could have recourse to such an artifice, who would not be ashamed of a cause that needed such support?

matter and superior to nature, "of whom, and through whom, and to whom are all things," In doing this, we have declined taking the wide range which nature offers in the mineral, vegetable, and animal kingdoms, and have confined ourselves to one single department. All are rich in proofs of the existence of a wise, and benevolent, and all-powerful Creator; but we have selected MAN.

We have already, in examining his physical structure, exhibited many instances, which we think every mind, not strongly biassed by the prejudices of a favorite system, must acknowledge to be convincing proofs of the existence of such a being; we shall now proceed to consider MAN IN RELATION TO THE WORLD WHICH HE INHABITS. And this view will corroborate all that we have before stated of evident design in the formation of man, and show also that the same marks of intelligence and wisdom are to be found extending to everything which has relation to his existence and welfare. The nature of the argument is the same with that which we have hitherto employed, but somewhat extended. We have already seen, that, in the composition of our corporeal structure, there are evident and mutual adaptations of parts to each other, combined with marvellous arrangements of complex machinery, working with admirable simplicity and certainty; we shall now endeavor to show that there are arrangements in nature, of a very extensive kind, which exhibit the same adaptation to the condition of man, and the mode of his existence. We think we can prove, that there is as plain and irresistible evidence of the adaptation of man to external nature, and of external nature to man, as can be seen in any two separate things that have ever been made for each other, and with a view and design to each other, by the wisdom and ingenuity of man.

If we see a house, capacious and elegant, the architecture of which is beautiful, and its conveniences complete; if we see every thing in it, and about it, adapted to the wants and habits of those who are to occupy it; if we see, adjoining it, a garden furnished with vegetables, and fruits, and flowers, a good supply of water brought within the walls of the residence, and every thing that can give shelter, and safety, and comfort; we conclude immediately, that in all these accommodations there was design, that the express object in view, was to furnish a suitable residence for a family; and, moreover, that whoever built, and designed, and arranged the whole, was well acquainted with the wants and wishes of its future inhabitants, and with what would secure them from harm, supply their needs, and afford them pleasure and enjoyment. Now, we think that it may be made evident, that the fitting up of this world, with its furniture and accommodations, indicate, much more strongly, the intentions of a wise and benevolent being, and prove the existence of one well acquainted with the nature and constitution of man, with all that was necessary to his safety and his comfort. Who, possessing a knowledge of the laws of hydrostatics and pneumatics, if he saw a ship, with its hollow interior, made of buoyant materials, fitted up with masts and sails, could doubt for a moment, even if he had never seen such an object before, that the vessel was constructed with a design that it should float on the water, be impelled by the wind, and guided by the rudder? Suppose a person well versed in the various branches of natural philosophy, and the practical use and combination of the mechanical powers, introduced, for the first time, to one of your mills, to inspect the whole process by which you generate and apply power to the working of machinery; could he hesitate, for a moment, in concluding, not only that the boiler and the engine, with its pneumatic apparatus, its tubes and valves and pistons, and the shafts and frames of the mill-work, were all made expressly for each other, but that the whole was fitted up by some person well acquainted with the powers of mechanism, and with the properties of the air and the laws of vapor, and that it was constructed with especial reference to these powers and properties? Now, we intend, in a few instances, to show that such is the most accurate adaptation existing between the furniture of this globe, and the constitution of man, and that in so many particulars, that it is impossible that it should be accidental; that the most intimate acquaintance with the powers of nature, is obvious in the structure of man, and that, in the various and nice adjustments between the working of the human machinery and the constitution of nature, the most perfect wisdom, and the most evident design, are displayed, and that to a degree far greater than can be observed in all the ingenious arrangements of human skill to which I have referred.

The first instance which I shall produce, is *the appetites which indicate man's wants, and the provision* *which nature affords to supply them.* We have already had occasion to notice the continual renovation which the corporeal structure requires, by the introduction of new matter into the system. But how shall it be ascertained when this new matter should be taken in, and in what quantities, and whether it should be solid or liquid, or in what relative proportion? This is a problem requiring such an intimate knowledge of the whole interior economy of man, that, if its solution were left merely to the mind, it would be extremely difficult to the ablest and most experienced physiologist, to most it would be utterly impossible. And yet, not only our comfort, our bodily and mental vigor, depend on this, but even the continuance of our mortal existence. We see, therefore, the same wisdom displayed, in not entrusting the management of so important an affair merely to the decisions of the mind, as in the appropriate distribution of power to the will, or to some vital principle, independent of the will, in working the muscles of the human frame. One of the highest efforts of ingenuity, in the construction of machinery, is to give it a self-regulating power. This is precisely the case in the human system, and shows the wisdom that was employed in its formation. We have internal monitors, faithful to their trust, and vigilant in the discharge of their office, that warn us when it is necessary that aliment should be taken. At first, the hint is gentle, and for a time may be disregarded, but the admonition is urged with greater force, the remonstrance becomes so pressing that it must be complied with, or great bodily suffering is the result. When solid food is requisite, we feel hunger, the proximate causes of which it is difficult to ascertain, but the power of which we cannot long resist. Whether it arises from mechanical or chemical causes, whether from a nervous influence acting directly on the stomach, or the sympathy of that organ with the other parts of the material fabric, we know that weakness, lassitude, pain, and a strong desire for food ensue; and that when a sufficient quantity of food has been taken into the stomach, the calls of hunger cease, to be renewed only when the system again requires aliment. So great a proportion of the human body consists of fluids, and so constant are the processes of evaporation by insensible perspiration, and of internal exhalation, that a frequent supply of liquid is absolutely necessary. When this supply is requisite, we feel a sensation which it is as difficult to explain as that of hunger, but the meaning of which we instantly understand. The fauces become dry and parched,—we thirst; the demands of this appetite are imperious; it is at our peril to resist them; liquid must be obtained, or we suffer torment. Such is the provident wisdom by which we are constantly reminded of what the system needs; and were the voice of these monitors but duly regarded, and all intemperance in solid or liquid aliment avoided, instead of the disease and weakness which render life miserable, how much more frequently would health bloom on the cheek, sparkle in the eyes, invigorate the whole frame, and add years of enjoyment to our mortal existence?

As aliment is needed, so aliment is provided, ample in quantity, and appropriate in quality. It is remarkable, that such is the constitution of our bodies, that they can receive nutrition so as to maintain life only from organized substances. All the solid aliment that we take, therefore, is of this nature. Though all the elementary substances which enter into the bodily structure abound through all nature, yet there must be certain combinations of these, they must be assimilated into the organs of some living structure, before they are capable of acting as food and taking a part in the human system. There is no substance in the mineral kingdom on which man can live; it furnishes condiments, medicines, poisons, but aliment it cannot yield. We must therefore have nutrition from animal or vegetable substances; which have their elementary matter already in a state of organization. Some animals are so constructed as to live entirely on vegetable matter, others have organs adapted only to aliment of an animal kind; man is capable of deriving nutrition from both. But if we feed on animals, these have first received their nutriment from vegetable substances; hence it has been justly observed that "plants are laboratories, in which nature prepares the food of animals." * The existence of man is, then, intimately connected with another class of organized beings, which are essential to its continuance, and which hold a middle rank between the mineral and animal kingdoms. Now, look into nature, and see the suitable and abundant provision which has been made. All the elementary substances which are requisite to repair the constant waste of the human structure, are found on

* Richerand's Physiology—p. 75.

the surface of the globe in great abundance. Plants of numerous kinds exist, endowed with an organization capable of collecting and assimilating these elements, and thus preparing them to take their place in a condition of still higher organization. How various and abundant are the grasses and herbage which the earth produces; how richly diversified and suitable to promote health and give enjoyment, are the seeds and fruits which grow for the use of man, adapted to every taste and every climate! How ample must have been the stock of seeds and plants which the earth first received, and how admirable that wisdom which not only formed these vegetable laboratories, but endowed them also with the power of reproduction! How can a man in his senses, when he contemplates this suitable and necessary provision to meet the wants of human beings, resist the impression of a designing wisdom and benevolence in such an arrangement? Vegetable life itself, even in its lowest forms, possesses a mechanism so curious, that art cannot produce any thing like it; and all this inimitable apparatus in nature without us, is so perfectly adapted to the still more complicated apparatus of our own frame, that human ingenuity may be challenged to produce any instance of one set of machinery made for another set, with more evident design than this arrangement exhibits.

It has already been observed that the human structure needs a considerable supply of moisture. Of nearly all that we take as drink, water is the basis or vehicle; and without a constant and abundant supply of this, vegetation could not go on. Besides the many important uses of water to refresh and cleanse our persons, to purify our clothes and dwellings, it is so essential to almost all the purposes of life, that if its supplies were withheld but for a short time, every living thing would perish, and the whole surface of the globe become a dreary scene of universal desolation. This essential fluid, on a sufficient supply of which every thing which lives on the surface of the globe is dependent, is composed of hydrogen and oxygen, united in a definite and invariable proportion. It is capable of existing in a state of solidity, as ice, and also in the form of vapor or gas. These several conditions depend on the quantity of caloric with which it is combined. If the law of its congelation were such that it took more readily the solid form of ice, its utility would, to say the least, be materially diminished; if an increase of temperature generated vapor with much greater facility, the great and salutary purposes which it now answers could not be realized. But such is the constitution of this important fluid, and such the laws of heat which affect its changes, that it possesses the most exact and beneficial adaptation to all the forms of vegetable and animal life. Uncombined, neither of the elements which enter into its composition would answer the purpose, though they existed separately in quite as great a quantity as at present; and if the action of other substances to which it is exposed were capable of readily affecting its decomposition, the deficiency thus occasioned would have a most disastrous influence on every kind of life.

Now, is it possible that a production so essential to man in so many ways, and to all organic life of every kind and degree, existing in just such a form, subject to just such laws, as should ensure its perpetuity in great sufficiency, and possessing the most complete adaptation to the constitution of man, could have been accidental?

Look again at the curious process of circulation, by which a constant supply of this necessary article is furnished to every part of the realms of nature. By the laws of heat, as they affect water, evaporation is constantly going on from the surface of the earth, from pools, rivers, and seas; and such is the nature of the atmosphere, that a considerable quantity of water, in the form of vapor, can be held in suspension by it. Besides the immediate uses of this fluid, held in solution by the atmosphere, which are very important to vegetation, by this means clouds are formed, and the refreshing dews and fertilizing showers descend. The great reservoir of water is the ocean; by the action of the sun's rays on its surface, large quantities of water ascend in vapor and form clouds, which, driven over the land by the aerial currents, fall in rain on the earth. We see, then, a reason why so great a portion, perhaps more than two thirds of the surface of the globe, is covered with water; a much less surface would not have yielded the requisite supply. "It was calculated by Dr. Halley, that five thousand two hundred and eighty millions of tuns of water were evaporated from the surface of the Mediterranean sea in one summer's day; and, according to Dr. Thomson, ninety-four thousand four hundred and fifty cubic miles of water circulate annually through the atmosphere."* Thus a circulation as necessary, and almost as regular, as that of the blood in the human system is maintained, on a scale of surprising magnitude, by a machinery working incessantly, with the utmost precision, and in a manner most beneficial to man, mostly without his knowledge, and altogether without his interference. Consider, then, the necessity of such a fluid to the continued existence and well-being of man's corporeal frame, indicated by an internal monitor, which acts without his will or consent, and which never fails to remind him when the system requires liquid; and also the absolute necessity of water to the existence of every kind of food, animal or vegetable, on which man, by his peculiar organization, is formed to live; and moreover, look at the complex apparatus, working according to the various laws relative to heat, the state of the atmosphere, the currents of air, and whatever other agencies are employed,—and can it be imagined that there is no intended adaptation of the one to the other—that there is no wisdom of an intelligent agent employed in this arrangement? Does chance ever work in this way? Or, can any man conceive that an explanation of adjustments so manifold, so extensive, so accurate, and so beneficial is given, when he is told that in all this there is "nothing but a succession of necessary causes and effects?" Might not all wisdom, all design, all selection, by precisely the same mode of reasoning, or rather by the same absurdity, be excluded from all works of human ingenuity, and the same solution with equal propriety be given for the existence of clocks, organs, and ships?

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* Epitome of the Elementary Principles of Natural and Experimental Philosophy.—Part I. by J. Millington—p. 108.

Let us now consider *the atmosphere in which man lives, and the organization which has especial relation to it*, and see what kind of adaptation there appears of the one to the other. The atmosphere is an invisible, elastic fluid, which surrounds the earth to the height of some miles above its surface. On every square inch its pressure is equal to fifteen pounds weight, which, were it not for its mechanical property of pressing equally in all directions, would be altogether insupportable; it would crush and destroy every living thing.* This atmosphere is the receptacle of all vapors, bears up or discharges the clouds, and is charged with caloric and the electric fluid, both essentially necessary to the functions of life. But it is not to its various and important uses in these respects, that we now refer, but to those qualities which adapt it to the purposes of respiration. Atmospheric air is a compound of two gases of a very different nature, and in different proportions. It contains by measure about twenty parts out of every hundred of oxygen gas, seventy-nine of azotic or nitrogen gas, and one of carbonic acid gas. Nitrogen is of itself incapable of sustaining life or supporting combustion; one important use of this gas in the air we breathe, appears to be to modify the properties and action of the oxygen. This latter gas, though combined in atmospheric air in so small a proportion, is so essential to all life, that it has sometimes been called emphatically vital air. In oxygen alone combustible substances burn with an unusual splendor, and consume with extraordinary rapidity. When inhaled into the lungs, it produces great warmth, excitement, and increased action of the heart. Diluted in the proportion we have mentioned, it is just adapted to the purposes of life: with a less quantity of oxygen, life would languish; a greater portion would soon wear out the system by over excitement, and produce premature decay. In this salutary proportion it exists all over the globe, wherever plants vegetate or animals live.

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* For the many important and beneficial effects resulting from the pressure of the atmosphere, see the 'Chemical Catechism,' by Parkes, ch. 2.

That the alternate reception of air into the lungs, and its discharge from the chest, are necessary to life, we all know and feel; but why it is so, has been a subject of very curious investigation and ingenious experiment. Some of the principal facts brought to light by modern science are the following:—When the blood, sparkling with vitality, bounds through the arteries, and carries the precious treasure to every part of the system, it is of a bright crimson or vermilion red; it returns through the veins dark in its color, considerably exhausted of its energy, and charged with the refuse of organization. The superfluous matter must be thrown out of the system, and new energy must be communicated to it, before it is again fit to circulate: if this is by any means prevented, we die. This salutary change is accomplished by bringing the atmosphere into contact with the blood, by which means the superfluous matter is extracted, and new life and color imparted to the vital fluid. The air breathed from the lungs is found to be of a very different kind from that which is inspired; a portion of its oxygen has disappeared, and in its stead about an equal quantity of carbonic acid is present, a gas possessing very deleterious properties. Nor is the new blood, or chyle, poured into the common receptacle from the thoracic duct, prepared for circulation till it has undergone the same process. The reception of the atmosphere into the lungs is quite as necessary to the maintenance of life as that of food into the stomach, and must be much more frequently taken into the system; the suspension of respiration for a few minutes, by night or day, would be fatal. Here, then, is a most beneficial adaptation to the constitution of man, existing in exactly the form requisite, found in ample quantity, and in every place. Surely this cannot be considered accidental and unintentional.

But let us take a cursory view of the apparatus which exists in the internal economy of man, and the manner in which it works, so as to derive the requisite advantages from the external atmosphere, and we shall behold one of the most evident and striking adaptations of the one to the other that were ever produced, or that it is possible to imagine. There is, as we have already had occasion to notice, a communication established between the lungs and the external air, by means of the trachea or windpipe; the mouth being opened, affords a free passage to the air through the upper extremity of this tube, called the larynx, along the course of the trachea into the lungs; by the same course the air which is expired proceeds. But it may be necessary to breathe when the mouth is closed, or employed in masticating the food; a passage, therefore, is provided through the nostrils by two apertures which open inwards, just above the top of the windpipe. The trachea passes downwards into the cavity of the thorax or chest and then branches off in two directions, to the right and left portions of the lungs. Between these lies the heart, ever performing its vital functions. The lungs are a soft spongy substance, full of air-cells and blood-vessels, and capable of considerable expansion when filled, and of collapsing into a much less space when the vessels are emptied. The two branches of the trachea throw out ramifications to every part of the lungs, which terminate in innumerable air-cells. The blood-vessels, at first imperceptibly minute, unite in each portion of the lungs to form the pulmonic artery and vein; the former connecting them with the right, and the latter with the left side of the heart. From the right ventricle, by its contraction, the venous blood, together with the contents of the thoracic duct, are thrown through the pulmonic artery into the lungs, to each portion of which an arterial branch is given. By innumerable minute ramifications the blood is thus spread through every part of the lungs, and, coming into chemical action with the air which has been inspired, the oxygen of the atmosphere, uniting with the carbon of the blood, forms carbonic acid gas, which at the next expiration is thrown out of the system, and the blood regains its power of stimulating the heart, and is again prepared for circulation. A celebrated chemist has calculated that, in twenty-four hours, nineteen thousand two hundred cubic inches of carbonic acid is given out, which contains more than five troy ounces of carbon * By others the quantity is estimated much higher. A considerable portion of redundant moisture is also at the same time expired in the state of vapor, formed, it appears, by the union of the oxygen of the air with hydrogen. And by the same important and refined chemistry, heat is continually evolved, by which means a constant temperature is maintained in the body, however variable be the surrounding medium.

But by what machinery is it that the lungs are kept in constant play? How is it that this pneumatic apparatus works, so as from ten to twenty times in a minute to

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* History of Chemistry, by Dr. Thompson.—Vol. II. p. 321. Dr. Kidd, in his Bridgewater Treatise, states the amount of carbon daily discharged from the blood to be much more. "It appears," he observes, "from experiments which have been made for the purpose, that during the process of respiration in an individual of ordinary size and health, about 27 1-2 cubic inches of carbonic acid gas are given off from the lungs in the course of one minute; which at the end of twenty-four hours would amount to 39,600 cubic inches, or, in round numbers, 40,000; and as 100 cubic inches weigh 46 1-3 grains, 40,000 would weigh 18,532 grains. Then, since a quantity of carbonic acid gas, weighing 100 grains, contains 28 grains of carbon, a quantity weighing 18,532 grains would contain 5,190 grains, or nearly eleven ounces, at 480 grains to an ounce; so that a quantity of carbon equalling two-thirds of a pound in weight, is daily discharged from the blood, by means of the simple process of respiration."—p. 131. Dr. Bostock, in his 'Elementary System of Physiology,' has not only given a comprehensive view of the ascertained facts relating to this important function, in all its bearings, but has also furnished a summary of experiments and opinions of the most distinguished physiologists, both British and foreign.—See Vol. II. ch. 7th, "OF RESPIRATION."

bring the air into action with the deteriorated blood, and to expel its superfluous carbon? Is there any thing like chance or accident to be seen? The lungs are placed on each side of the heart, in a cavity called the thorax, guarded by the spinal column behind, surrounded on the sides by the curvature of the ribs, connected with a movable bone in front, called the sternum or breast-bone. The floor of this cavity is the diaphragm, commonly known as the midriff. In this cavity there is no vacant space; the external covering of the lungs is always in contact with the internal lining of the thorax. By means of the trachea, the mouth, and the nostrils, the lungs have always a free communication with the atmosphere, and have always a portion of air in their vessels. From the known properties of air, whenever a partial vacuum is formed the remaining air expands, and, occupying a larger space, becomes rarefied. By the enlargement of the cavity of the chest, the air within the lungs dilates them to the increased dimensions, and the air being thus attenuated, the external atmosphere rushes in through the trachea, till the equilibrium is restored. When the chest again contracts, the internal air is driven out. Now there are two directions in which the thorax may be enlarged; in its horizontal diameter, by increasing the distance between the spine and the sternum, and between the ribs on either side; and by increasing its perpendicular diameter from the diaphragm upwards towards the trachea. The ribs are of a substance and texture which admit of their bending with more or less of curvature, and attached to them are muscles capable of moving them. But how can any motion of the ribs enlarge the cavity of the chest? If they were fastened to the back-bone at right angles, any motion upwards or downwards would necessarily contract the space. But they are inclined downwards at an acute angle, so that when they are so raised as to bring them nearer to a perpendicular with the spine, the sternum is thrown forward, and the cavity by this singular contrivance enlarged. But this would not give sufficient space to admit a proper quantity of air into the lungs; the capacity of the chest is increased principally by enlarging it in a perpendicular direction. For this purpose there is a muscle of very peculiar formation, called the diaphragm, which, while it serves as the floor of the chest, dividing it from the stomach and intestines, is capable of such a motion as considerably to enlarge the thorax. Differing from all other muscles, its tendon is in the centre, and the muscle constitutes its lateral parts. The lower part of this tendon is firmly fixed to the spine, it is connected laterally with the ribs. The diaphragm rises upwards in the form of a double arch or dome, the convex part forming the floor of the chest, and the concave being a kind of roof to the abdomen. When this convex floor is flattened, of course the capacity of the chest is enlarged; and that such an operation might give still greater space, the plane of the diaphragm is not perpendicular to the spine, but from the back slants upwards to the front; thus possessing a larger surface by its obliquity, and, consequently, by its depression, giving more enlargement to the chest. When this muscle contracts, as its tendon is fixed and cannot move, the muscle instead of being arched becomes flat. At this moment the abdominal muscles relax, and allow the viscera to move forward, which we very sensibly feel. At the same instant the intercostal muscles of the ribs act, the chest enlarges, the expansive force of the air in the lungs gives them a corresponding enlargement, the external atmosphere immediately passes through the trachea into the lungs, and occupies the innumerable air-vessels. The blood from the right side of the heart distending its innumerable vessels at the same time, nothing but a thin membrane separates the air and the blood; sufficiently strong to prevent the fatal consequences of an escape of the blood into the air-vessels, and thence into the trachea, which would produce instant suffocation, and yet of sufficient tenuity to allow the chemical action by which the oxygen of the air combines with the redundant carbon of the blood. The number of these air-cells has been estimated at upwards of one hundred and seventy-four millions, and the surface which they present at more than twenty thousand square inches, or better than one hundred and fifty square feet.* Thus "a stratum of blood several hundred feet in surface, is exposed to a stratum of air still more extensive; and these two strata of contiguous fluids are comprehended within an organ which may easily be compressed within the compass of a few inches. To look for any parallel to this, amid the most masterly contrivances of science, were vain." * A second or two are sufficient for the renovating process; the capillary vessels of the pulmonic veins receive the blood, and convey it to the left side of the heart fit for circulation. But by this time more venous blood is waiting for the same process, and it is necessary that the carbonic acid gas, now formed in the air-vessels, should be expelled. With as much precision as if endowed with perfect intelligence, with as complete consent as if the plan had been formed by mutual concert, the whole apparatus puts itself in motion to accomplish these results. The muscles of the chest relax, and the elasticity of the ribs brings them to their former position, the diaphragm ceases to contract, and now the abdominal muscles are brought into action, the diaphragm is forced upwards, and the chest and the abdomen are reduced each to its previous and relative dimensions; the lungs are thus necessarily compressed, the condensed air rushes out through the trachea and the mouth or nostrils, and pours its highly carbonated stream into the atmospheric ocean, to form new combinations. Thus this essential process goes on, repeated several times every minute, and many thousand times in the twenty-four hours is the vital fluid renovated—and man lives.

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* "It has been supposed by Hales, that representing the size of each air-cell at an hundredth part of an inch in diameter, the amount of surface furnished by them collectively would be represented by 20,000 square inches. Keil has estimated the number of these cells at 174,418,615, and the surface which they present at 21,906 square inches; and Lieberkuhn has increased it to no less than 1,500 cubic feet."—Animal Physiology, p. 99. Dr. Bostock thinks that "there is reason to suppose that they (i. e. these estimates) are, in a great measure, imaginary," but states that the "extent of the surface of the membrane lining the cavity of the air-

vessels must necessarily be very considerable."—Elementary System of Physiology, pp. 19, 20, ed. 2d.

* Animal Physiology—p. 99.

Who, then, can soberly contemplate all the various phenomena of respiration, without a devout admiration of the surpassing wisdom and divine intelligence which they so manifestly display? Who would envy the man, who could view such a diversity of marvellous adaptation and beneficial arrangements without emotion? Who can understand the constitution, the reasonings, or the bewilderment of that mind that believes that all this has merely happened, that there has been no design or intention in it, that all these provisions and adjustments, on which the life and happiness of man depend, could have resulted from the operation of unintelligent, undesigning, physical causes? Here are three distinct adaptations, to suppose any one of which existing without a designed reference to the others, is one of those enormous improbabilities that defy all reason, and require the most unaccountable credulity to entertain for a moment. First, here is the complete adaptation of the surrounding atmosphere, in which we live and move, to that state of the human blood which requires constant renovation: then, the pneumatic apparatus, so admirably constructed as to bring the oxygen of the atmosphere and the carbon of the blood into chemical action; and, further, the machinery adapted to work this apparatus, so that the process may constantly be going on. Could it, by any possibility, have been without design, that by such means the deleterious carbon should be constantly disengaged, and heat as constantly evolved to keep up the temperature? That such an atmosphere with such properties should have existed—that such a substance should be formed as the lungs—that it should have vessels so appropriate for the air and for the blood—that each portion of the lungs should have its communication with one side of the heart, for the reception of venous blood, and with the other side to return the renovated fluid—that there should have been just such muscles as were necessary to move the ribs—that the angle of the ribs with the spine should be just that which would admit of an easy enlargement of the chest—that the diaphragm should have been of such a shape, and of such a power, and adapted work in harmonious concert with a number of other muscles—and that all these should go on, repeating their motions several thousand times a day, for the whole of our life? That a person should be found capable of believing this, is itself among the most inexplicable phenomena that can be presented to our notice.

There is another very striking adaptation connected with the atmosphere; that is, its capability of transmitting sounds, and the curious formation of the ear. It is unnecessary to show how important is the capacity which we possess of hearing and distinguishing sounds, in how many cases our safety is connected with it, and how much the happiness and improvement of society depend on it. Sound is produced by the vibrations of the particles of a body communicated to the air, and by the air transmitted to an organ adapted to receive them. Such is the anatomy of the internal parts of this organ, that it is impossible to give an adequate description in mere words; and so curious and exquisite is the construction of its various parts, that the full use of some of them has not yet been discovered. The external ear is a cartilaginous expansion, so constructed as to receive the undulations of the air, from which they pass through a tube, and come to a very curious combination of cavities and membranes, and bones and nervous branches, variously disposed, so as by the auditory nerve to convey to the brain the particular sensation. If any of this delicate machinery is injured, the faculty of hearing is impaired, if not lost. To the eye of the skilful and experienced anatomist, it appears a structure the most beautiful which the mind can contemplate.* Is not the supposition preposterous, that such a formation should occur from the casual concurrence of sundry particles of matter, possessing so complete an adaptation to the properties of the atmosphere, with reference to the specific purpose of hearing, and answering an end so eminently beneficial?

The limits we have assigned ourselves will not admit of our adverting to all the other senses, further than to state, that each contains a mechanism which sets all imitation at defiance, bears the most visible impress of intended adaptation to its peculiar function, and is of most important service to man in his intercourse with the external world. But there is one which, though often brought forward, is so beautiful and impressive an instance of design and adaptation, that I cannot persuade myself entirely to pass it by;—it is the organ of sight. Amid the innumerable wonders which surround us on every hand, there is not one, perhaps, which is more adapted to fix our attention, and to excite our admiration of the divine wisdom which appears in every thing we contemplate, than the power of vision. Of all the senses by means of which we hold converse with the external world, this appears to take the lead, in the extent of its office and the utility and pleasure which it yields. By this we become acquainted with innumerable objects, the knowledge of which is of the highest consequence to us, of which, without the aid of this sense, we could not have had the faintest conception. By this organ, we not only have perceptions of color, but learn to estimate distance, form, and magnitude. In an instant the glance of the eye takes in ten thousand objects, and runs over all the diversified appearances of an extensive landscape with that rapidity, that every individual part seems at precisely the same instant the object of perception, each occupying its proper size and position relative to the whole. By this means we are sensible of the existence and position of objects, not only at a few yards, but at millions of miles distant from us; we have a perception of what lives, and moves, and has its being in our immediate locality on the globe which we inhabit, and of those mighty orbs which sail in the boundless ether, or, at distances to which millions of leagues are but a speck, illumine other systems. Without the power of vision, if existence were possible, how contracted would be our ideas, how poor our enjoyments, how few our connections and associations.* We

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* Bell's Anatomy.—Vol. III. p. 178. ed. 3d.

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* How feelingly has the first of English poets, in his address to light, adverted to his own loss of sight.

"Thus with the year
Seasons return, but not to me returns
Day, or the sweet approach of even or morn,

can form no estimate of the immense difference which the possession of this sense makes in the circumstances of man, from viewing the infelicities of a few who are deprived of this advantage, but who live in the midst of thousands who possess it. By the constant intercourse with others, who possess this sense, they derive much of the benefit which results from it; by the kind attention of friends who have sight, a large portion of the miseries of blindness is obviated, and the remainder considerably mitigated. But if it could have been possible for man to exist without this sense, in what a deplorable condition must he have passed his life. No inspirations of nature, from a view of its wonders and beauties, would have kindled his delight, no countenance of a friend beaming with kindness would have cheered him, no art could have been cultivated, science could not have existed,—exposed to accidents at every step, disasters would have constantly attended him, and death must soon have closed his suffering and joyless existence. But the continuance of human life would have been impossible. Man is not made to vegetate, he must provide for himself, or perish; "without the power of vision,

> Or sight of vernal bloom, or summer's rose,
> Or flocks, or herds, or human face divine;
> But clouds instead, and ever-during dark
> Surround me! From the cheerful ways of men
> Cut off; and for the book of knowledge fair,
> Presented with a universal blank
> Of nature's works, to me expung'd and raz'd;
> And wisdom at one entrance quite shut out!"

Paradise Lost, b. III. v. 40—50.

therefore, superadded to all the complicated arrangements of his frame, we cannot conceive of the continuance of the race of man. It is much to our purpose, therefore, to notice as briefly as the subject will admit, the arrangement by which this knowledge of outward objects is communicated to the mind. It is by a medium which exists in nature without us, and by a very curious organization within us, each possessing the most complete adaptation to the other, that this is accomplished. This medium is light, which, flowing from the visible object, comes into contact with the organ of vision, and produces those sensations on which our perceptions of color and form are founded. Without this medium vision is impossible; it is not by the objects themselves being brought into contact with the eye that they are seen: they may remain at the distance of a few inches, or yards, or millions of miles; but portions of this medium streaming from them, and impressing the appropriate organ, convey the intelligence of their existence and of their visible properties; so that, strictly speaking, it is not the objects of vision, but the light proceeding from them that we see.

Light is one of the most mysterious, the most useful, and the most beautiful appendages to the fitting up and furniture of the globe that we inhabit. It is, indeed, not only beautiful, but the source of all beauty in the material world. It is this which reveals all other objects, and exhibits them in their size, and proportion, and form. The radiance of the sky, the verdure of the fields, the tints of all the flowers, the lovely diversity of the landscape, and the various expression of the human countenance all depend on light.

> "Of all material beings, first and best!
> Efflux divine! Nature's resplendent robe!
> Without whose vesting beauty all were wrapped
> In unessential gloom." *

Without entering with philosophical minuteness into the subject, the following are some of the most obvious properties of light on which vision depends. Light is either direct, as when it proceeds from a luminous body; or reflected, as when it is thrown back from an object on which it has fallen. When the sun, the great source of light, pours around the plenitude of day, every object reflects, in all directions, from all points of its surface, a greater or less portion of the rays which fall on it. As light is composed of rays of all the primary colors, the due mixture of which constitutes its bright appearance, by the different kinds of bodies differently colored rays are absorbed and reflected; when all the rays but the red or blue, for instance, are absorbed by any body, and either of these are reflected, we have the perception of the blue or red color. The angle at which the rays of light are reflected from an illuminated object, is always equal to the angle at which they fall on it, as determined by a perpendicular to its surface at the point of contact; objects are thus seen in the direction in which the reflected ray falls on the eye. Another

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* Thompson's Seasons.—SUMMER.—HYMN TO THE SUN.

equally important property of light is its refrangibility, by which, when it passes from one medium to another of different density, in a direction oblique to the surface of the medium into which it enters, it suffers a refraction corresponding to the difference of the density of that body on which it falls, and the angle which it makes with its surface. By this property the rays which fall on every point of an object from a luminous body, after being reflected, may again, by passing through a properly refracting medium, be brought to meet in a point called the focus; and by the re-assembling of these rays in such points in due relative position, an image of the object is produced. Thus if the rays of light proceeding from any object pass through a convex lens placed in a proper position, they will form an image of the object at the focal distance of the lens. This is the principle on which the camera obscura is constructed; a mirror receives the rays from surrounding objects, and reflects them through a double convex lens into a small apartment, which is darkened to prevent the interference of other rays; the rays which pass through the lens are received at its focal distance on a surface, and all the external objects thus presented to the mirror, the only use of which is to give the required direction to the rays, are perceived in their proper colors, and relative position, and size, and motions.

Now the eye is precisely such an instrument, constructed on exactly the same principles, but with a perfection which no human ingenuity can reach. Through a small aperture the rays of light are received, which, passing through a double convex lens assisted by other refracting media, enter a darkened chamber, and at the proper distance are received on a screen, where the image of the external objects are correctly formed. But the construction of this curious and useful organ deserves our attention. In an elevated and commanding position in the human structure, in bony cavities of considerable strength, are deposited two small globes, cushioned on a substance soft and yielding, and so attached as to admit of freedom of motion. Each of these optical globes is surrounded by an outer coat, of a very strong but flexile texture, called the sclerotica; this coat, however, does not completely envelope the ball of the eye, about one fifth of which is covered in the front by a transparent membrane called the cornea, which is also more prominent than the other parts of the globe, forming a portion of a small sphere on a larger; and at the back part of the eye the optic nerve passes through the sclerotica. This latter coat is lined with the choroides, a thin membrane, the inner surface of which has a layer of dark coloring matter. Within this is an expansion of the optic nerve called the retina. Within these coats are enclosed the refracting substances called the humors of the eye. In the front, filling up the protuberance of the cornea, is the aqueous humor, in which is placed the iris, a beautiful ring of different colors surrounding the pupil, that black spot in the centre of the eye, which is the only aperture by which the light enters. Behind this is a transparent substance of greater density, forming a double convex lens, and termed the crystaline humor. The remaining part of the interior, constituting more than three-fourths of the whole, is filled with the vitreous humor. On the retina, where all the rays after their refraction are brought to a focal point, a perfect image of the object to which the axis of the eye is directed is formed, and, by some mysterious process, the steps of which we can no farther trace, the information is conveyed along the nerve to the brain, and from the sensation thus produced the mind acquires its perception of external objects.

The great perfection of this small but invaluable piece of divine mechanism cannot fail to impress the mind of every attentive observer; it is such that every approach to excellence in optical instruments is but an imitation of it. If the construction of the eye and the manner in which the image of the external object is brought to the retina had been understood, telescopes would have been formed many centuries before Galileo, and many of the later discoveries in astronomy might have been anticipated. That the eye was formed by a being intimately acquainted with the properties of light, and the laws of optics, who can deny or doubt, who knows its construction, whose reason is not distorted by the power of prejudice? In every optical instrument, the substance and shape of the refracting medium, and the distance of the screen which is to receive the image, must be adjusted with the nicest accuracy, or the apparatus is useless; — this is complete in the human eye. The inside of the telescope is painted black; the interior of the camera obscura must be darkened to prevent the interference of any other rays, which would render the image indistinct; the chamber of the eye is darkened, and the image on the retina is distinct and vivid. The different degrees of refrangibility which the various rays which form white light possess, when passing through a simple lens, give a confused coloring to the outline of the image which it should not possess, and render it indistinct. To obviate this imperfection was a problem, which for a long time exercised the ingenuity of the most acute and profound philosophy. In the construction of the eye the difficulty is anticipated, and the inconvenience prevented; by an accurate adjustment of the several refracting media, the chromatic aberration is corrected. Another difficulty which human ingenuity has had to encounter, arises from the law of refraction by spherical lenses; which bring the rays which pass through their centre to a focal point somewhat different from that to which the remoter rays converge. This inconvenience, which is termed the aberration of sphericity, is perfectly, and in the most scientific manner, remedied, by the peculiar curvatures of the crystaline lens, and the concentric layers, of different density, of which it is formed.* Now, is it not an absurdity which contradicts all reason and experience, and shocks the understanding by its enormity, to suppose or assert that all these exquisite adjustments are mere casual things, without any design; that it so happened by mere accident that such an organ, with such adaptations was formed?

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* I have not here taken notice of the power of the eye to adapt itself to the various distances of objects. Many ingenious experiments have been made and several different hypotheses have been framed to explain this power; while some have doubted the existence of any apparatus for this purpose, and have been disposed to refer it merely to attention. See an account of these experiments and opinions in 'Bostock's Physiology,' Vol. III. pp. 102—108; and 'Bell's Anatomy,' Vol. III. pp. 95—105. Magen-

But, again, take notice, how small is the instrument, how vast is the field of view, and how great the multiplicity of objects, which at a single glance it is able to take in. On a circumference of the retina, not exceeding perhaps half an inch in diameter, is painted distinctly the whole landscape in view, including several miles of space, with all its diversity of hill and dale, and groves and gardens, and corn-fields and pastures, with flocks and herds, and lowly cots and stately mansions. How inconceivably small must be the space which each single object occupies; how minute the points over which those objects in the miniature landscape travel, to correspond with all the changes in position which are taking place in the scene without; and what exquisite sensibility must that nervous expansion possess, which is thus susceptible of impressions so numerous and diversified within so small a compass! But in proportion to the delicacy of any piece of mechanism

die says, "whatever be the distance of the object, the eye ought, according to theory, to change its form for the object to become distinct, or at least, the crystalline humor should be carried forwards or backwards, according to the distances. Here experiment is in contradiction to theory, which renders nugatory all the explanations hitherto proposed."—Elementary Summary of Physiology, Vol. I. p. 43.

is the necessity of precaution to preserve it in safety. We have already noticed the bony cavity in which this precious ball is deposited, the strong but flexile coat in which it is enveloped, and the soft cushion on which it is imbedded; but this is not all. The quantity of light which we receive is ever varying, from the effulgence of the summer noon, to the darkness of the starless night: the extreme sensibility of the organ renders some adjustment necessary to adapt it to the quantity of light; this was evidently foreseen by the power which formed the eye, and provided for in a way which has not its parallel in all the contrivances of man. Observe that colored ring which surrounds the black spot in the centre of the eye, which we call the pupil, and which is the only aperture, by which the rays of light enter, the size of which is variable. This beautiful iris is a piece of finely wrought net-work, furnished with a number of muscular fibres, in two separate sets, one circular, the other radial. By these it is enabled to increase or diminish the breadth of the ring, and consequently to vary the size of the aperture. This also has a self-adjusting movement independent of the will. When the light is too much for the delicate nerve at the back of the eye, by the action of the circular muscles, the iris enlarges the breadth of its ring, and so diminishes the pupil that fewer rays enter: when, on the contrary, the quantity of light is diminished, and it becomes necessary to receive as many rays as possible from a given point, the iris, true to its office, contracts the radial fibres, enlarges the aperture, and exposes a greater surface to the admission of the rays. Hence the uneasy sensation we feel on going suddenly into a very strong light, till the iris has adjusted itself; and also the difficulty we have in perceiving objects when we leave a strongly illuminated place, till this admirable piece of self-regulating mechanism has enlarged the pupil of the eye. Did chance with its random throws, or did equally blind and unthinking necessity ever produce workmanship like this, with such obvious relations to other parts of a whole, and with functions so evidently referring to a precise object?

Mark also, with the same evident intention of preserving from harm, how the eyebrows throw out their bushy protuberances, to prevent any drop of moisture or particle of dust from gliding down the forehead into the eye. See how the eyelids cover the front of this organ, and instantly close whenever danger is apprehended, or shut it completely up when it needs rest, and by their lashes prevent any small objects from approaching too near. And notice the glands, which are ever secreting their soft liquid and oozing it out, to keep the surface of the eye moist, and to furnish the lids with the means of keeping it ever clean by their frequent motion.

Nor is the muscular apparatus, by which the eye is turned in every direction, less admirable. Each eye is furnished with six muscles, by which we can at pleasure turn its axis towards any object. These are attached to the external coat, and are all lodged within the orbit of the eye. One of these, the upper oblique muscle, exhibits a very curious contrivance. "Its tendon passes through a cartilaginous pulley in the margin of the orbit, and then turns back again to be inserted into the eye-ball; so that the effect produced by the action of the muscle is a motion in a direction exactly the reverse of that in which its fibres contract." Well may the author add, "This mechanism, simple as it is, affords one of the most palpable instances that can be adduced of express contrivance; for in no other situation could the muscle have been so conveniently lodged as within the eye-ball; and in no other way could its tendon have been made to pull in a direction contrary to that of the muscle, than by the interposition of a pulley turning the tendon completely round."* How surprising is that mechanism which, by its delicate and easy movements, directs the eye in following the course of any body in motion, glances with nearly the rapidity of light over the largest field of view, and without a moment's pause gives an almost imperceptible and constant motion to this organ, which the liability of the retina to exhaustion renders necessary.

Few and brief as these notices are, and imperfect as is the sketch, who is not, with such contemplations, filled with devout admiration of the divine wisdom and benevolence, so strikingly manifest in the power of vision? Who does not see, in the adaptation of light to the eye, and of this organ to the properties of light, the most convincing proof of the existence of an intelligent being, by whose power and skill man was formed? Who will venture to say deliberately, after an attentive survey of the wonders of the eye, that they are all mere accidents of matter—that the lens and the other humors were not made to refract the rays—that it was a mere chance that there was a nervous screen to receive the rays just where they were brought to the point of convergence, or that there was any nerve at all —that though there may be intention in the construction of the silken purse, which a lady knits, yet there can be none in the formation of the beautiful and necessary iris—that though there may be design in the use of the rope which a seaman reeves through a block, to give the requisite direction to a yard or sail, yet there can be none in the passing of one of the tendons of the oblique muscles through a pulley, to secure the necessary direction for the movement it was to effect—that though things of inferior skill require mind, mechanism of exquisite skill requires none,—and that therefore, by this inverted rule of reasoning, all the adjustments and adaptations of the eye, its nerves, and muscles, and coats, and lenses, and glands, and all its preserving apparatus, required no mind at all? "He," says a writer in one of our leading periodicals, "who explores the structure of the human eye—its expressive forms—its exquisite movements—its union of tenderness and strength—its magic chamber, furnished with lenses and curtains—and its delicate canvass, which receives the vivid pictures of external objects, and presents them to the brain, while it takes back the creations of the mind, and gives them an external form and locality; —he who studies this master-piece of divine mechanism, and who does not join in the fervid ejaculation, 'He who made the eye, does He not see!' deserves to be degraded from the rank of intelligence, and placed in that small appendix to human nature which the moralist only recognizes—the blind leaders of the blind." *

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* Dr. Roget's Bridgewater Treatise.—ANIMAL AND VEGETABLE PHYSIOLOGY, Vol. II. pp. 465—466.

In the instances which we have already selected, we have seen an organization of curious workmanship in man, constructed with evident reference to the properties of nature without him; we have shown that the furniture and appendages of this globe have an obvious adaptation to his wants and capabilities: before we quit this part of our subject, there is a class of adaptations somewhat different from those which have been adduced, and which do not perhaps come so exactly under this division of our subject, yet which, as they manifest very strikingly beneficent design, and exhibit arrangements which could result only from a knowledge of what was necessary to man's existence and happiness, and show an intention to provide for his welfare, we request permission briefly to notice. Look at *man*, then, *in connection with beings of his own species.* His first introduction to this world is marked by entire dependence on the care of others. There is no living thing which requires the hundredth part of the solicitude, the constant attention, and the patience which never tires, in order to preserve and rear it; and how completely are all these secured by that instinctive affection which springs up spontaneously in the bosom of the parents, which waits for no acquaintance to produce it, which needs no argument to enforce it, no example to direct it, but which, with a gush of feeling which only the parent knows, hears the first cry of life, sees the helpless and unconscious babe incapable of the most distant recognition, and presses it to a heart which would shed its choicest blood to secure this precious embryo of humanity from harm. What can equal the delicacy and strength of the mother's fondness, which in one moment starts into full maturity and power, and which continues unabated by all the toils, and watching, and privations which she endures for the babe which hangs upon her breast? In the bosom of the lowliest and rudest peasant a new fountain of sensibility is opened when he feels that he is a father: the mother of his child becomes incomparably more interesting than when he first beheld her in all her virgin charms: his home is still dearer; and while his toils are sweetened by the thoughts of tenderness which work within him, he looks forward with delighted anticipation to the period, when in his cot he shall behold the mother and her lovely babe, or receive into his own sinewy arms the precious treasure. Can this instinctive affection, on which the preservation of man depends, at that helpless period, when he can neither solicit aid nor even be conscious of it when rendered, be the result of chance? Is not the supposition a wild extravagance, rather than sober reason? Or, does the heartless attempt at explanation which atheism offers account for it? What mother, whose heart has throbbed with maternal tenderness,—what man, through whose soul the first announcement that he is a father has thrilled with unspeakable emotion, can hear, without surprise bordering on indignation, all this depth of sacred feeling attributed to the physical attraction of matter, or the chemical affinities of the elementary substances which enter into the composition of our bodies?*

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* Edinburgh Review, January, 1834, p. 437.

But again; look at the helpless condition of the young stranger, and the admirable provision which is made for his subsistence. The new-born infant has not only no sense or power to provide for his sustenance, but he has no teeth to masticate his food, and while much nutrition is necessary to his growth, his digestive powers are very weak. Just at this time a glandular apparatus which had always existed from the infancy of the mother, though never before needed, performs in a most active manner its functions, and secretes a liquid precisely of the kind which the infant needs, moderately warm, mild, and grateful to the palate, at once easy of digestion and highly nutritive. No sooner is the child applied to the bosom where his sustenance is already provided, than his lips, and tongue, with the various muscles concerned in deglutition begin, as though instructed by experience, to perform most skilfully their functions. How inveterate must be the atheism which can deny design in this? Was the breast of the mother formed by the mere concurrence of certain particles of matter, without any reference to the infant whose existence was to depend on it? Was it by accident that such a fluid, so bland and nutritious, should be formed just at the time when the infant needed it? Was there no intention in placing the breasts just where the arms of the mother could fold her helpless babe to her bosom, while her eyes could gaze with fondness, and the very look of affection assist in exciting the excretion of this balmy liquid? Was it chance that gave to the child the power and the instinct of sucking as soon as he entered the world? or had this instinct no design, no reference to the mother's breast? What but infatuation the most unaccountable, or prejudice the most desperate, can deny the evidence of benevolent design, and consequently of a benevolent designer, in the provision thus made for a new-born babe?

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* System of Nature.—Vol. I. pp. 33, 82, 83.

Every view we take of man confirms the assurance that he is, not accidentally, but essentially, a social being: of this his wants, his desires, his pleasures, his sympathies, all give indications. It is scarcely necessary to add, that in the scale of being he rises high above all other classes of living creatures, which have their existence in this world. He is capable not only of mere animal feeling, but of sentiments the most tender, and delicate, and elevated; his memory recalls the past; his imagination gives present existence to things however remote in time or space; the range of his thoughts is boundless. In the means which he possesses of carrying on intercourse and exchanging ideas with his fellow-men, we see a striking adaptation to this superiority of nature. The power which animals possess of expressing their wants and desires, appears to correspond with their capability of thought and feeling. Their cries and gestures are sufficient for all the purposes of their intercourse. But man, dignified with reason, possesses a medium of intercourse worthy of the high rank which he holds in creation. He, and he alone, has the power of speech. This is certainly one of the most surprising characteristics of man. By producing certain vibrations in the air, he finds the means of giving outward expression to all the innumerable thoughts which pass through his own mind respecting himself or other persons, or any objects present or absent, real or imaginary, and of receiving in return like communications from others. All the affections and antipathies, the hopes and fears, the purposes and expectations, the facts and reasonings and opinions, the entreaties the admonitions and the warnings, which it is thought necessary or desirable to express, are thus conveyed from mind to mind, throughout the whole social community; and results most numerous, and varied, and far more important than all which proceed from laws of matter operating on the visible world, are constantly produced by the action of mind on mind. How simple and yet how astonishingly efficient is the process by which all this is carried on: it is merely by a few elementary sounds, called vowels and consonants, combined to form syllables, and words, and sentences. These, however, are sufficient as a vehicle for the thoughts of all men, of all languages: the powers of these combinations appear, indeed, to be inexhaustible. But simple as this process seems, when we consider the total dissimilarity of a sound and a thought, of an emotion of the heart and the vibration of the air, and at the same time the nice distinctions, the deep abstractions, the curious relations which every language exhibits, we do not wonder that many should suppose the attainment to have been originally beyond the reach of man, and that speech and language, so eminently beneficial to man, and yet so wondrously artificial, arose from a divine inspiration. But, considered as an acquirement dependent on reason, how inexpressibly valuable it is!—What would be the condition of man or the state of society without it? Let us glance at the organization which serves so important a purpose, and which accords so completely with the superior faculties and varied wants of man as a social being.

The voice, which is the medium of language, depends on the possession of lungs; all animals which have these are capable of some kind of voice, but "man only can articulate sound, and enjoys the gift of speech."*

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* Richerand's Physiology, p. 424. "The particular disposition," adds this author, "of the mouth, of the tongue, and lips, makes all pronunciation impossible to quadrupeds. The monkey, in whom these parts have the same conformation as in man, would speak like him," (that is, supposing him also to possess reason like man) "if the air, as it leaves the larynx, were not diffused into the hyo-thyroid cavities, which are membranous in some, cartilaginous and even bony in the howling monkey, whose cry is so hoarse and melancholy. Every time that the animal would utter his cry, these sacs swell, then empty themselves, so that he is not able at will to supply to the different parts of his mouth the sounds they might articulate."

"A bird," says another eminent physiologist, "pronounces words, even phrases, but does not speak. Man alone is gifted with *speech*, which is the most powerful means of expression possessed by the mind; he alone attaches a meaning to the words which he pronounces, and to the arrangement which he gives them; without his intellect he would not speak."—Magendie's Physiology, Vol. I. p. 155.

The principal organ of voice is the larynx, a cartilaginous cavity which forms the upper extremity of the trachea, at the top of which is the small slit of the glottis, through which the air passes. This organ is furnished with a set of muscles at the command of the will, by which at pleasure, as the air is forced through it from the lungs, a sound can be produced, varying through the whole gamut of the voice, and capable of immense variety of expression. By some physiologists the larynx has been considered as a wind instrument, producing its sound by the vibrations of the lips of the glottis, as the reed of the clarionet; by others, the ligaments of the glottis have been viewed as the chords of a stringed instrument. The author just quoted observes, "It appears that we are to consider the larynx as combining the advantages and exhibiting the double mechanism of wind and stringed instruments: it is on this account that it surpasses all musical instruments, by the extent, the perfection, and, above all, by the inexhaustible variety of its effects."* By the mouth, the lips, the tongue, and the teeth, these effects are multiplied beyond any power of calculation. Who then can view this curious structure, which gives to man the power of speech, a power so completely adapting him for that state of social life for which all his feelings and sympathies indicate that he was formed, and which so corresponds with his high superiority of reason, without a reverential admiration of the divine wisdom and goodness which are apparent, and without perfect astonishment that any persons should see nothing here but chance, or, what amounts to the same thing, "necessary laws" of matter, working without consciousness or design?

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* Richerand's Physiology, p. 423. In pp. 111, 112, of "ANIMAL PHYSIOLOGY," one of the most valuable of the publications of the Society for diffusing Useful Knowledge, there is a curious calculation from Dr. Barclay, of the almost innumerable varieties of tone of which the human voice is capable, by which it appears that millions of millions of distinct sounds may be produced, each one differing from the other.

The last adaptation we shall notice under this branch of discourse, has not only reference to man in his social condition, but, in the most general manner, affects his well-being and improvement; and that is of the instrument by which he acts on external nature to the mind which employs it. Through all the gradations of animal life, the means of protection and preservation are possessed in different degrees. Among the instruments which serve their purposes, we see great variety; beaks, talons, jaws, and mouths of peculiar construction, claws, tusks, horns, and that singular organ, the trunk of the elephant. But how is man to provide for himself, to protect himself, and to make nature subservient to his comfort? In point of physical capabilities, acuteness of some particular sense, and the instincts which guide without reasoning, he is inferior to many of the brute creation; he has not the strength of the lion, the fleetness of the stag, the eye of the eagle, or the scent of the dog; but he has REASON and a HAND; and the possession of these give him a pre-eminence immeasurably above all the other tenants of this globe. The perfection of this instrument accords wisely with the superiority of the agent which has to employ it. We have no reason to believe that any animal possesses a capacity, to which a more complete instrument for acting on external nature would be of material service. The dog would not gain much by the exchange of a hand, with a thumb and fingers, for his foot; and where there is the nearest approach to the powers of the human hand, what tool has been made, or what new art untaught by instinct, has ever been attempted? A hand without the intellect to put it to the use of which it is capable, would still have left man among the inferior tribes of brutes, in just the state in which he was created. Reason without the hand, and with a hoof or claw, could not have developed itself, in the manner in which it has, and for want of exercise would have appeared very different from what it now is; in this case no arts could have been matured, no philosophical experiment attempted, no knowledge transmitted by means of writing and books; man would have wandered naked and destitute, enjoying but little advantage from society, deriving a precarious subsistence from the spontaneous productions of the globe—if, indeed, in so helpless a condition he could have subsisted at all,—and exposed defenceless to the attacks of any beast that might seek to prey on him. But with such an instrument, and such a power to wield it, what wonders have been achieved! Cultivation has fertilized the surface of the globe, flowers and fruits have sprung up almost at his command, the forest has become a garden, and the wilderness teemed with cities and villages, the ocean has been navigated, the stars counted, society enriched with the treasures of art and science, and man has asserted his sovereignty over all that dwell on the globe.

Let us, then, notice for a moment the mechanism of that instrument by which the mind accomplishes such wonders. Inserted laterally at the upper part of the trunk, and just below the head, we see on each side an arm, at the extremity of which is placed the hand. First the humerus, the strong bone of the shoulder, works in a socket of the scapula, in such a way as to admit of motion in every direction, and of course giving to all that is appended to it the advantage of its freedom of motion. From this the fore-arm proceeds, connected firmly with the humerus, by means of ligaments, supported by two bones, the radius and ulna, the lattter of which plays in a hinge joint, admitting of motion in one direction only, and both articulating with the wrist. The eight bones of the wrist, curiously joined, form also the foundation on which the five metacarpal bones of the hand rest; * from these spring out the four fingers and the thumb, each, except the latter, possessing three bones and as many joints. To all these joints suitable muscles with their tendons are appended, by the operation of which, the movements of the several parts of this curious machinery are innumerable. How well adapted is the hand to give a sudden stroke or a delicate touch, a tenacious grasp or a gentle pressure:

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* "We commonly say that there are five metacarpal bones, in which reckoning, we count the thumb with the rest: but what is called the metacarpal of the thumb is properly the first phalanx, or the first proper bone of the thumb, so that the thumb, regularly described, has, like the other fingers, three joints."—Anatomy and Physiology of the Human Body, by J. and C. Bell, Vol. I. p. 181, ed. 4th.

it can take up by the points of its fingers the finest needle, or by the application of both hands embrace and hold fast a circumference of several feet, and all the intermediate dimensions. How fine and rapid are the movements, how astonishing the accuracy with which the fingers fly over the strings of a harp, or the keys of a piano; and how exquisite must be the working of the nerves, and muscles, and tendons, and bones, and joints of the hand, this "instrument of instruments!" By means of such an instrument, under such guidance, the power of an individual is multiplied almost indefinitely; the hammer, the axe, and the saw, made and employed by the human hand, produce effects which would defy the strength of the lion, and to which the gigantic might of the elephant would be but infantile weakness. In possession of the mechanical forces, and with the knowledge of chemical combinations, one individual commands the power of a host. Thus, before man all living creatures bow, and pay to him their homage and their service. The fiercest animals are subdued, the wildest tamed, and whatever any of them possess, that can minister to the convenience or comfort of man, is seized and appropriated by him. Neither the flight of the eagle, nor the fleetness of the antelope, nor the vast bulk of the whale amid the polar ice, gives security from the power of man—of man, weak and feeble as he is, but armed with reason and a hand.

Now does it look like chance, or design, that there should be this adjustment of the hand to the mind, that the perfection of the instrument should be in such accordance with the power of the agent which is to employ it? Are we to be told that the power of genius, and the varied and astonishing capabilities of the human intellect, are nothing but the combinations, and affinities, and movements of oxygen, azote, hydrogen, and carbon, accidentally happening to meet in such a condition as to originate thought and all the phenomena of mind? And that to match with this sensorial organization, separate combinations of similar elements happened as accidentally to form a humerus, to fit with its extremity the cavity of the scapula and to work in it, and also a fore-arm with its ulna, and radius, and hinge joint, and the curious bones of the wrist, and those of the hand, and fingers, and thumb? Did ever any romance of the wildest extravagance imagine such a concurrence of fortunate accidents as must have happened in this case?—That all the bones and joints should have fitted each other; that the shoulder should not have had the articulation of the bones of the wrist, nor that of the elbow; that the hand should be divided into fingers, and these into so many joints; that there should be a thumb, and of such a strength compared to the fingers, and that it should not have been on a line with the fingers, which would have rendered the whole hand useless, or nearly so, and that not one joint should fail of its ligaments, or its tendons, and muscles, not only to move it in one direction, but to bring it back again to its former position; that an arm with such an hand should be placed on each side, to be able to act with each other, and that just under the inspection of the eye, and subject to its guidance,—that these, and a thousand things besides, each one of which was essential to the completion of such an instrument, should have happened, without any wisdom, or design, or intention, to meet, so as to form the hand what it is, supposes such a combination of fortunate occurrences as the most exuberant imagination never brought together, in the most marvellous fiction that ever made credulity stare!

We were to produce instances in man's relation to external nature, of evident design, in order to prove that a wisdom as well as a power to which we can assign no limits, was employed in these arrangements, on which the existence and well-being of the human race depend; we think such instances have been produced in such variety, and of a nature so convincing, as cannot, by all the sophistry of infidelity, be explained on any other principle than that of the existence of an all-wise and powerful Creator. We shall now, therefore, proceed to the last view which we proposed to take of man; this will extend the adaptations of a designing wisdom to THE RELATION OF THAT WORLD WHICH HE INHABITS TO THE GREAT SYSTEM OF WHICH IT FORMS A PART.

We have already occupied so large a portion of this lecture with the last branch of discourse, that it is necessary to comprise our remarks on the concluding part in as small a compass as possible. We have seen some of the striking adaptations indicative of design in the structure of man, in the relation of the parts of his corporeal frame to each other and to the whole—in the relation of man's organization to the world and its furniture—and we now notice the relation of this world to the whole, of which it forms a part; and though the glance which we take of the great system must be cursory and brief, it will, I trust, be sufficient to show that the traces of a being of infinite wisdom and intelligence are here also strikingly manifest.

The globe which we inhabit forms part of a magnificent system, which takes its name from the central body, around which the whole revolve, thence called Solar System. In this splendid and stupendous piece of celestial machinery, we see a vastness which overwhelms us, and which reduces all the magnitudes and distances to which we are accustomed on the surface of this earth to a mere point. The sun, in the centre, being between one and two million times larger than this globe, and the outer circle of this immense orrery, a circumference of ten thousand millions of miles. Around this centre, and at different distances, revolve seven primary planets, besides four which slightly vary from them, several of which are attended by moons or secondary planets, the whole number of which is eighteen, all of which accompany the progress of their primaries. All these bodies are globular, all move round the sun from west to east in nearly circular orbits, and in nearly the same plane,* have a rotary motion on their own axis, and a certain inclination of their poles to their ecliptics.† All these mighty orbs at distances which the mind cannot take in, move with a regularity which no clock-work can equal, from year to year, and from age to age.

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* The satellites of Uranus, or the Georgium Sidus, are a remarkable exception, the planes of their orbits being nearly perpendicular to the ecliptic.—See Treatise on Astronomy, by Sir John F. W. Herschell, p. 299.

† Besides the primary and secondary planets, there are comets to the amount of several hundreds, which move round the sun;

The first adaptation which strikes us as indicating design, is the relative position of that body which is the source of light and heat to all. If we wish to place a lamp or stove in such a situation that the benefits resulting from either should be equally diffused through a given space, we fix it in the centre. And if a Being of infinite wisdom had the regulation and disposition of all the parts of this celestial system, would he not select the same position for the sun? And would it not be something very singular, that chance should do precisely that which the wisest foresight would choose and determine? All the purposes of the system, for aught that we can perceive, would have been answered just as well if the central body had been opaque, or if the luminous body had been one of those smaller orbs which move round the centre. Had this been the case, the whole condition of our globe would been completely different, and neither man nor beast, neither animal nor vegetable life could have existed. And is not the supposition as gratuitous as it is bold and daring, that the lighting up of the whole magnificent orrery by kindling

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amidst all that is apparently irregular in their movements, "the motions of comets are regulated by the same general laws as those of the planets,—the difference of the cases consisting only in the extravagant elongation of their ellipses, and in the absence of any limit to the inclination of their planes to that of the ecliptic,—or any general coincidence in the direction of their motions from west to east, rather than from east to west, like what is observed among the planets."—Herschell's Astronomy, p. 306.

this glorious orb just in its centre, had no reference at all to those myriads of beings who should receive perpetual benefit from it?

There are two other arrangements which are eminently beneficial, and which have no appearance whatever of chance or accident. By the rotation of the earth on its axis, every part of the globe shares in the benefit of the sun's rays; without this one half of it would be a dark and cheerless desert, where no life could exist, and the other would be parched by oppressive heat and be in a perpetual glare. The inclination of the earth's axis is another means of good. If the axis of the earth were perpendicular to the ecliptic, the polar regions would be in constant winter; but by the inclination of the earth's axis the frozen regions of the north have their summer, and the cheerless winter of the antarctic climes is enlivened by the return of the sun. To this beneficent adjustment we are indebted for all the delights and blessings of the change of seasons.

In the combination of those forces by which the earth performs its annual revolution, we see another indication of supreme wisdom and goodness. By the attraction of gravity the earth is ever drawn towards the centre; by the projectile force impressed on it, it tends to move forward in a straight line; and by their joint operation it moves around the sun. These two forces, however, might be combined in very different proportions, so as to vary almost without end the elliptical shape of the orbit; but to admit of animal and vegetable life, the orbit must be either circular or nearly so. The latter is the case with regard to the earth and the other planets. If these forces had been differently combined, so as to produce an elliptical orbit of much greater eccentricity than that which the earth now has, the seasons would have been very different; at one period cold beyond endurance would have destroyed vitality in any form that we can conceive of; and at another part of the year the earth would have been scorched with insupportable heat. Now what satisfactory account can atheism give of the existence of the projectile force at all? This, at least, cannot be affirmed to be an essential property of matter. Nothing beyond the merest conjecture can be advanced on this point by infidelity. Was the exact adjustment of these two forces, and the nearly circular orbit of the earth as its result—the only case in which the earth could be inhabited by the present race of beings—a matter determined without foresight and wisdom? Is it philosophy or infatuation to believe, that this most accurate adaptation of the shape of the earth's orbit to the wants, and comforts, and well-being of the creatures that inhabit the world, is a matter of chance, or, which amounts to the same thing, a result of the unconscious, unintentional operation of mere physical causes?

And lastly, look at the harmony of the whole system, and the provision made for its continuance. If no intelligence presided over this magnificent planetarium, combining the forces by which the several bodies move, allotting to each his station, and giving direction to their various movements, how can we account for the exact regularity by which so many bodies move, each independent of the other, but all forming one connected whole? How came it to pass, if there was no design or plan to regulate these various bodies, that some of them did not move from east to west, or in orbits perpendicular to each other, or why were these orbits all so nearly circular? Who that is not under the dominion of an incurable prejudice, can suppose or assert that it is without any design that they are placed at just such distances, acted upon by just such forces, and have just such orbits as should prevent their interfering with each other's movements so as to endanger the safety of the whole or of any part of the system, but that still, age after age, the mighty machine should keep moving with all its precision, and that the planets and their satellites should keep on their way with undeviating accuracy and perfect harmony? There are, however, some slight apparent irregularities, which arise from the law of universal gravitation. Not only does the sun attract every planet, but every one of these planets has an attractive force on every other, which tends to disturb that simplicity and regularity of movement which would take place with reference to the sun and any one planet, if there were no others in existence. But it has been found, by a most profound mathematical calculation, that none of these disturbing forces affect the permanence of the system; but that, on the contrary, they are all so nicely balanced and adjusted as to correct each other, and to tend to its preservation; that these irregularities partially considered are completely regular when the whole is taken into account, and have a certain limit beyond which they cannot pass, certain boundaries within which they oscillate.* Now, think for a moment on the knowledge, the wisdom, the care requisite to adjust the density, the size, the position, the velocity of these several bodies, so that while each acts on the other, every disturbance should only produce order, and every irregularity so balance another as to preserve the most complete and beautiful harmony, without which harmony no living beings could inhabit the earth, at least such as are now found on it; and can all this be the result of chance? "Surely," says an excellent author, "the obvious impression that rises from this view of the subject is, that the solar system, with its adjustments, is the work of an Intelligence, who perceives, as self-evident, those truths to which we attain painfully and slowly, and after all imperfectly; who has employed in every part of the creation refined contrivances, which we can only with effort understand; and who, in innumerable instances, exhibits to us what we should look upon as remarkable difficulties remarkably overcome, if it were not that, through the perfection of the provision, the trace of the difficulty is almost obliterated.*

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*"Many interesting questions here present themselves to our notice. Have the planetary ellipses always been, and will they always be, nearly circular? Among the number of the planets, have any them ever been comets, whose orbits have gradually approached to the circular form by the mutual attractions of the other planets? Will the obliquity of the ecliptic continually diminish, till at length it coincides with the equator, and the days and nights become equal on the earth throughout the year? Analysis answers these questions in a most satisfactory manner. I have succeeded in demonstrating that whatever be the masses of the planets, inasmuch as they all move in the same direction, in orbits of small eccentricity and little inclined to each other, their secular inequalities will be periodic, and contained within narrow limits, so that the planetary system will only oscillate about a mean state, from which it will deviate but by a very small quantity; the planetary ellipses, therefore, always have been, and always will be nearly circular, from whence it follows that no planet has ever been a comet, at least, if we only calculate upon the mutual actions of the planetary system. The ecliptic will never coincide with the equator, and the whole extent of its variations will not exceed three degrees."—Laplace's System of the World, translated by J. Pond, F. R. S. Vol. II. pp. 44, 45. Also Sir J. F. W. Herschell's Astronomy, c. XI," On PERTURBATIONS." See also the chapter in Mr. Whewell's Bridgewater Treatise, written with much clearness and effect, " ON THE STABILITY OF THE SYSTEM." When speaking of the probable existence of a Resisting Medium, this author observes, " But it may be objected, the effect of the medium must be, ultimately, to affect the duration of the earth's revolution round the sun, and thus to derange those adaptations which depend on the length of the year. And, without question, if we permit ourselves to look forward to that inconceivably distant period at which the effect of the medium will become sensible, this must be allowed to be true, as has already

Here, then, we close our argument from the works of

been stated. Millions, and probably millions of millions of years, express inadequately the distance of time at which this cause would produce a serious effect. That the machine of the universe is so constructed that it may answer its purposes for such a period, is surely sufficient proof of the skill of its workmanship, and of the reality of its purpose; and those persons, probably, who are best convinced that it is the work of a wise and a good Creator, will be least disposed to consider the system as imperfect, because in its present condition it is not fitted for eternity."—pp. 205, 206.

* Whewell on Astronomy and General Physics.—p. 169.

nature; not because we have exhausted the subject, but because what we have advanced is, we conceive, amply sufficient to prove our point. So abundant is evidence, in every department of nature, that our task has been that of selection. Of the three great divisions, under which the various productions of the globe are arranged, we have taken only the animal kingdom; of the numerous tribes of animals, every race and every individual of which affords striking instances of designing wisdom, displayed in almost endless diversity, we have fixed on man; and in considering him we have chosen only some few instances to our purpose, exhibiting, however, very obvious proofs that an intelligent power was employed in his formation. Each single instance, in itself considered, contains such marks of contrivance and proofs of design, as no atheistic hypothesis can explain, such as an eye, a hand, or even a single joint; but in the combination of so many of these parts, to accomplish one end, all working separately but all uniting to effect one object, we see an accumulation of evidence which very few subjects will admit. Recollect for a moment the extent of proof which we have advanced. We have shown, in the various systems of bones, muscles, and nerves, in the digestive and circulating apparatus, such instances of exquisite skill and undeniable adaptation as cannot be equalled by all the ingenuity of human contrivance; we have farther shown, that between the wants and capabilities of man and external nature, there exist adaptations and adjustments so many, so various, and so exquisitely curious and accurate, as could not possibly be accidental; and also that these relations extend to the planetary system, which, in the beautiful regularity of all its stupendous machinery, and, among other great purposes which may have been originally designed, in the important benefits of which it is productive to the inhabitants of this globe, is a most impressive exhibition of the wisdom and the power of a beneficent Creator. And, with these instances in your recollection, I ask with confidence, whether any cause can be assigned for all these effects adequate to their production, except the agency of an intelligent Being of infinite wisdom and power? How extravagant must be the credulity which can believe that the mere concourse of atoms, moving according to the laws of matter and motion, should establish all the harmonies of the planetary system, fit up a world so beautiful and so commodious for its future inhabitants as this, and then assemble, without any design or concert, in such positions as to form all the machinery of the human frame, and to make all the necessary provisions for the preservation and continuance of the human race? To suppose that there should be such a concurrence of particles of matter, forming the necessary portions of stone, timber, iron, glass, and all the other material, as should construct a vast manufactory, with all its numerous pieces of machinery set in action by a power generated by another distinct and complicated apparatus, that the whole should be warmed by steam and lighted by gas,—to suppose that all this should be accomplished by the "necessary laws" of matter, without an architect to plan, an engineer to design, or a workman to labor, is calm and sober reason, when compared with the boundless absurdities involved in the supposition that such a system, such a world, so fitted up—with such inhabitants—each individual containing within himself a far greater number of adjustments, of surpassing accuracy and unrivalled machinery, than the most ingenious production of human art, should spring into being without an intelligent Maker. Does not every dictate of reason reject the idea, does not every sentiment of the heart, on a review of the wonders of nature, respond rather to the language of our text, "O Lord, how manifold are thy works; in wisdom hast thou made them all?"

Notwithstanding the length to which this lecture has already extended, I must yet claim your attention to the manner in which the advocates of the atheistic hypothesis have endeavored to meet this argument, or to evade its force. The author of the "System of Nature" assures us that atheists have no need to recur to any such cause as we have assigned, "in order to explain the phenomena of the universe, to develop the operations of nature."* Atheists are "natural philosophers, who are convinced that, without recurring to chimerical causes, they can explain every thing, simply by the laws of motion, by the relation subsisting between beings; by their affinities; by their analogies," &c.† Let us hear, then, how the origin of man is explained on these principles. "If again it be asked, what origin we give to beings of the human species? We reply that, like all other beings, man is a production of nature."‡ "If, then, it be demanded, whence came man? We answer, our experience on this head does not capacitate us to resolve the question; but that it cannot interest us, as it suffices for us to know that man exists." * But he affirms that there is "no contradiction in supposing that the human race, such as it is at the present day, was either produced in the course of time or from all eternity." (!) † Still he is inclined to think that man was formed "in the course of time."† "However it may be," he continues, "if we are obliged to recur, by imagination, to the origin of things, to the infancy of the human species, we may say that it is probable man was a necessary consequence of the disentangling of our globe, or one of the results of the qualities, of the properties, of the energies of which it is susceptible in its present position;—that he was born male and female;—that his existence is co-ordinate with that of the globe in its present position." ‡ "The primitive man did, perhaps, at first, differ more from the actual man than the quadruped differs from the insect." § Now observe, I entreat you, how anxious this writer appears to get rid altogether of the inquiry into the origin of man; nor is this surprising; it is, we feel assured,an inquiry which must, if rationally pursued, prove fatal to the atheistic scheme. We are dissuaded from the unprofitable and uninteresting pursuit of such a question; "it cannot interest us" to know "whence came man." Cannot interest us! Why this is a point the decision of which will determine the great question at issue between us and atheism. Prove only that such

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* Vol. II. p. 503. † Vol. II. p. 519. ‡ Vol. I. p. 139.

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* Vol. I. p. 139. † Vol. I. p. 140. ‡ Vol. I. p. 146.
§ Vol. I. p. 147.

a being as man could be produced, "male and female," by the accidental concourse of material atoms, by any physical properties of matter, and we must admit that the same causes might give existence to all the wonders of the universe. But if we have proved that there are numerous and decisive evidences of the most surpassing wisdom and benevolent intention exhibited in the formation of man, and his relation to external nature, then it undeniably follows that there is a supremely great and intelligent Creator. And shall we be told that it cannot interest man to know whether he is the offspring of chance, or the production of divine power?—whether he owes his being, with all his faculties and capabilities of enjoyment, to the wisdom and beneficence of an Almighty Creator; or whether it be an idle fiction to suppose the existence of such a being? "Cannot interest us" to know whether the warmest emotions of gratitude should be cherished to a Being who has laid us under infinite obligations to love and serve him, and who has unbounded power over us,—or whether we should endeavor to repress every feeling of this kind which rises in the bosom, and to efface from the mind every such idea as a debasing and injurious superstition! What must be the state of that man's mind, what must be the moral condition of a man, who has brought himself to such a point of hardened indifference, of unnatural, irrational insensibility, as to treat the inquiry how man came into being, and whether or not he has a Maker, as an uninteresting trifle!

Observe, further, how ready this philosopher of atheism is to favor any supposition, however extravagant and absurd, provided it only exclude the agency of a Creator. The race of man may be eternal, or of recent date; may have sprung into being as it now is, "male and female;" "born," but without parents, his only progenitors being the entangled powers of the primitive globe, whose struggles to get loose were the travailing pangs that gave birth to the human family;—or it may have advanced from no one knows what inferior condition—that of a reptile, an oyster, or an animalcule, perhaps—to his present high station in the rank of being. Man may have been at his first formation any thing, may have come into existence any how; this atheistic advocate sees nothing absurd in any one conjecture or its very opposite; he will welcome as a friend and ally any hypothesis, however wild and fantastic, if it only exclude intelligence from the formation of man, and deny the being of a God.

And what explanation of the innumerable instances of wisdom and design which are apparent in the structure of man is it, to say that it resulted from "the present position" of the earth. If this were the case, why are not men and women now produced by the continuance of the earth in that position?[*] How is it that we never find springing up on our sunny banks, or green pastures, or by the river's brink, some newly-formed man or woman, a child, or at least some rudiments of a human being. Or, if in the climate of our northern isles the earth is not sufficiently prolific, why have not such wonderful productions been known in the tropical regions? Such discoveries, the writer well knew, had never been made; but he seems to console himself with the hope that some such are still in reserve. "What is it," he asks, "that authorizes them to believe this sterility in nature? Know they if, in the various combinations which she is every instant forming, nature be not occupied in producing new beings, without the cognizance of these observers? Who has informed them this nature is not actually assembling, in her immense elaboratory, the elements suitable to bring to light generations entirely new?" *

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[*] Attempts have been made sometimes to neutralize the force of such remarks as the above, by asking, on the other hand, why, if there is a Creator, does he not now create new beings? But a moment's consideration will show that such a question cannot restore the balance. An intelligent Creator is one who acts according to his own will and choice;—the "physical causes" to which atheism refers every thing have nothing of this kind. An infinitely wise and powerful being may determine what limits he will place to the exercise of his own power on any occa-

What are such fancies as these but "the baseless fabric of a vision?" and what must be the weakness of a system that can lean on such props? What answer

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sion, or in what way and at what period it shall be employed. "Physical causes" must go on without any capability of exercising more or less power, or selecting any time, or of limiting for any reason their own acts. If man be the product of "the properties, the energies" of which the earth "is susceptible in its present position," the inquiry is perfectly relevant, why do not the same "properties," &c. in the same "position" of the globe, produce men now? If an almighty and intelligent Being is his Maker, the question, why does he not continue to create is quite impertinent: it might as well be asked, why did he create man at all, or create him as he is?

* System of Nature.—Vol. I. p. 148.

is it to all the evidence which we bring, to talk of "the disentangling of our globe," or "the results of the properties, of the energies, of which it is susceptible;" we ask, are there any properties or energies, short of infinite wisdom and boundless power, that can satisfactorily account for all the wonders within us and without us?

Another author, anxious to exclude the agency of the Deity from the formation of the world, admits the difficulty of accounting for the existence of man and the larger animals in "the position which the globe at present holds in relation to the sun," * and therefore concludes, with admirable logic, that the true solution of all the difficulties which press on the atheistic scheme may be obtained, by supposing the earth to have been in a different position with regard to the sun. But can any one be imposed on by such fallacies as

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* "But the question of the greatest difficulty is, that which relates to the origin of the first and most powerful kind of animals that exist upon the earth; the position which the globe at present holds in relation to the sun, does not warrant us in the conclusion, that either man or the larger kind of animals in brute creation could have resulted from this position. The same power that formerly produced them would be able to produce them still, and in addition to the ordinary process of reproduction, we should have a right to expect new beauties and wonders, equal, at least, to the most excellent which we now behold. This, however, is not the case, and the fair deduction on the ground of philosophy is, that the relative position of the earth and sun must formerly have been very different from what it is at present, and that it is upon a hypothesis of this kind that we are to seek for a solution of the highest difficulties with which we are presented in the animal world."—Palmer's Principles of Nature.—p. 54.

these? Because the earth does not now produce men and animals, does it follow that it ever did, or ever could produce them, in any position whatever? what can be expected but bare assumption, when evidence cannot be obtained, and proof is impossible? Does the atheist know that the earth ever was in a position materially different from that which it now occupies? From what astronomical data or geological researches, can he ascertain that the variation in the size or shape of the earth's orbit was ever such as this hypothesis requires? But whatever he may suppose the earth's position to have been, does wisdom of design or benevolence of intention depend on the sun's rays? We ask whether it can be imagined, by any man of reason and candor, that any degree of heat or cold is sufficient to account for all the marvellous contrivances and exquisite machinery which the frame of man exhibits? But the very supposition carries with it its own refutation; neither the vegetable productions which now cover the globe, nor the present races of animals which live on it, could have mantained their existence, even if brought into being, if the earth's mean distance from the sun, or the shape of its orbit, had been materially different. If this hypothesis fails, the same author will venture another. "There is one other idea," he remarks, "of analogical weight in the discussion of this part of the subject. Nature is every where periodical in her exertions and energies; she is susceptible of fatigue and lassitude, and her most powerful operations are followed by proportionate debility and inactivity. It is, therefore, possible, in the order of nature, that the most powerful animals might have been the result of an inconceivable exertion, to which nature for millions of years after might have been totally incompetent."* And these are the reveries which we are to take for reasoning! We point to innumerable instances of curious structure exhibiting the most consummate wisdom, and then we are told in reply, that in a paroxysm of unusual power, the excitement to which, had been accumulating for ages, unconscious matter became endowed with intelligence and full of wisdom, and putting forth intellectual powers to which the genius of Newton was but puerility, gave birth to all these wondrous exhibitions of divine skill; but that, exhausted with the effort, all intelligence and wisdom again disappeared, and matter became as brute and unconscious as ever, and waits a few millions of years to become as wise and powerful again!

We are frequently referred, with an air of triumph, to the present curious processes of nature in the birth and growth of a human being. "Man," says the writer we have frequently quoted, "in his origin, is an imperceptible point, a speck, of which the parts are without form," &c.† While in intimate relation with the parent which gives them birth, we are told, his organization is gradually developed, and afterwards his growth proceeds, and life is maintained by the appropriation of food. Thus "in all the phenomena man presents from the moment he quits the womb of his mother, to that wherein he becomes the inhabitant of the silent tomb, he perceives nothing but a succession of necessary causes and effects."* But all this only tells us how the machine works, not how it is constructed. In all the functions of life which preserve the individual and continue the species, we see the working of this curious apparatus; but the question still returns, how came such an apparatus into being? To show us the gradual development of animal life, and how, by the assimilation of portions of external matter, it proceeds to maturity, and how it subsequently decays, is no answer to the inquiry, whence is that life, and what is the origin of that most curious organization with which it is connected. The farthest point to which this attempted explanation carries us back, is to the commencing life of one individual; but this one proceeds from another, and this again from another, and for this also, there was a parent; and we ask whence was the first, and how came this first human being, or first pair of human beings, among other incomparable wonders of their frame, to possess the property of giving birth to others? In all the cases to which the atheistic philosophy refers us, life already exists; and it is only from life that life is received:—an organized body exists, and it is only from organization already in existence that organization is produced;—plants spring from plants, birds from birds, beasts from their like, and men from their own species. Can atheism show us a single instance of the power of unconscious matter, with all its "qualities and energies," producing an organized living being from a mass of inorganic matter? To reply to our evidences of intelligence and design in the formation of man, by referring us to the manner in which the functions of vitality are discharged by a human being already in existence, is an evasion so disingenuous as to be a dishonor to philosophy and an insult to common sense.

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* Palmer's Principles of Nature.—p. 54.

† System of Nature.—Vol. I. p. 125; also pp. 64, 65.

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* System of Nature.—Vol. I. p. 127.

The same author, repeating the poetic dream of Lucretius with slight variation, has recourse to the fiction of seminal principles or germs of all things contained in the earth, and hatched into being by a genial state of the atmosphere. "The attentive observer," this writer remarks, "sees nature full of *erratic germs*, some of which expand themselves, whilst others wait until motion has placed them in their proper situation, in suitable wombs or matrices, in the necessary circumstances, to unfold, to increase," &c.* But what germs of animal or vegetable life do we see that are not produced from animals and vegetables? Is there the shadow of a proof that any of these embryo seeds of living beings ever existed independent of some living being from which they proceeded? And where are these matrices? Have any ever been known or discovered separate from the parent stock, in which the young of animals or man have had their organization formed, or in which a seminal principle has been nurtured into full life? Where, we may confidently ask, do those erratic germs and matrices exist, but in the fancies of an atheistical philosophy? But if we were to suppose that some such germs and matrices originally existed, what was to become of the young animal, especially of the infant, when thus introduced into life? Where are the breasts to suckle him, the arms to enfold him, the bosom to cherish him, and the maternal care to anticipate every want, and to ensure to him the necessary protection? Why did not the advocate of atheism carry out the pretty fiction of the poetic philosopher, and make the earth open its bosom and stream out milk from its pores, while the ether enfolds him, and the flowers form his fragant couch, and the birds of heaven carol him to rest?

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* System of Nature.—Vol. I. pp. 63, 64.

But in order to lessen the difficulty of man's production by mere physical causes, with all that complicated and beautiful organization which he now possesses, we are sometimes told that he is not now what he was at his first formation; that the primitive man probably "differed more from the actual man than the quadruped from the insect;" that something very imperfect was produced by the earth, or by nature, which in the long process of ages gradually improved till it became a human being.* Some modern naturalists have expended no small portion of labor and science to prove this imperceptible gradation. Nature, it is assumed, first produced animalcules, or some rude specimens of animal life, of the very lowest kind: in process of time these, by an original tendency to a higher state of being, and influenced by external circumstances, put forth the rudiments of some new part or organ, which, in the course of many generations, became more perfect; these again, continuing in the progress of ages to advance, improving their organization at every step, formed at length the superior animals which we now see inhabiting the earth; while circumstances less favorable left others behind in this march of improvement. It is further assumed, that the endeavors which the force of circumstances produced to exercise any power, gradually formed an organization adapted to such a power or faculty; thus, in some, many efforts to swim produced fins where they were needed; and in others, the desire and the frequent attempts to fly, originated wings; and that all the varied faculties and organs which any animals possess were produced in the same way; thus, at length, some very fortunate species, of a very high ancestry, passed into the condition of monkeys and apes—and thence, by successive gradations, acquired the form and the rationality of human beings. There is, however, in this theory, the same vitiating defect which pervades every attempt to account for all the wonders of the human frame, without a creating Intelligence,—that wants facts to support it. Nor is this all; facts are decidedly against it. If the infusoria, those imperceptible specks, myriads of which may be sporting in a drop of water, without being detected by the clearest sight in the brightest sunshine,—if these microscopic beings be selected as the first efforts of nature, so far from being so very deficient in organization as this system supposes, recent discoveries have shown that they are possessed of a well-constructed apparatus for digesting and assimilating their food, and for performing all the functions of life; that each, indeed, possesses an organization so exquisitely minute, and yet so completely adapted to its condition, as to afford in itself a strong and unanswerable argument for the existence of an intelligent Creator. Nor is the gradation in the scale of being so complete as this hypothesis would assume; there are so many large chasms and discrepancies as appear to make strongly against it. But waving these points, we ask for proofs, for well-authenticated facts, as evidence of any one species of animals passing from a lower to an essentially different and higher form of existence. Do the whole records of history contain one credible instance of this transmutation of species, of this advance upwards, so that completely new organs are acquired? Have all the extended researches of modern travellers and scientific naturalists furnished an instance of that intermediate state which must mark the transition of a dog to an ape, or that of an ape to a man? Has the dog, domesticated as he is, in constant intercourse with man, amidst all the improvements of his natural instincts, and his acquirement of new habits, in all the numerous varieties of size and shape, and color, in which he is found, and after all his successive generations, put forth one new organ, or made any nearer approach in his anatomical structure to the monkey tribe? Has an orang-outang ever been discovered in his intermediate stage towards a human being, either in the constitution of his body, in his power to utter articulate sounds, or in any of those exhibitions of intellect which form a broad and marked line of separation between man and the brute creation? * In the total absence of facts to support such a fancy, there are facts which can be adduced of a kind entirely opposite. We have the means of ascertaining, with an accuracy far surpassing that of verbal description, what was the anatomical structure of many existing races of animals three thousand years ago. "'It seems,'" say the professors of the museum of Paris, "'as if the superstition of the ancient Egyptians had been inspired by nature, with a view of transmitting to after ages a monument of her history. That extraordinary and whimsical people, by embalming with so much care the brutes which were the objects of their stupid adoration, have left us, in their sacred grottos, cabinets of zoology almost complete. The climate has conspired with the art of embalming to preserve the bodies from corruption; and we can now assure ourselves by our own eyes what was the state of a great number of species three thousand years ago. We can scarcely restrain the transports of our imagination, on beholding thus preserved, with their minutest bones, with the smallest portions of their skin, and in every particular most perfectly recognizable, many an animal, which at Thebes or Memphis, two or three thousand years ago, had its own priests and altars.'" † Did the inspection of these an-

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* Though all who espouse this theory are not professed atheists; though some may admit that this "nature" to which they assign the formation of every thing, is an inexplicable something produced by the Deity; yet it is a supposition of which atheism gladly avails itself.

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* "We know nothing of the faculties of this animal, which can suggest the idea that it rivals the elephant in intelligence, much less any thing that can countenance the dreams of those who have fancied that it might be transmuted into the 'dominant race.'"—Lyell's Geology, Vol. II. p. 48.

† Pp. 29, 30.

imals, every minute part of which was in so complete a state of preservation, justify the visionary theory to which we now refer? On the contrary, in no representative of a former race, whether wild or domestic, thus examined, was any specific difference seen, nor was there the slightest reason to suppose that three thousand years had in any degree altered any one species; but proof incontrovertible was afforded that no tendency to improvement, however combined with external circumstances, has to this day brought up the ibis or the crocodile, the cat or the dog, to any higher state of organization approaching towards that of a human being; and that no remove at all has been made from the rank in which they have been, and in which we have every reason to believe they will continue as long as their respective races exist.* An essential part of this scientific fiction is, that the functions of organs, and the uses of parts, did not originally spring from their structure, but that certain acts, and habits, and modes of living have in reality produced every peculiarity of organization. We see, indeed, in the structure of animals of various kinds many provisions for repairing and healing, and even in some cases for reproducing a part; these seem to arise from the same wise and benevolent intentions which appear in innumerable instances, throughout the whole of the animal economy, as safeguards against the many accidents to which life is exposed; in all these cases, however, we see no new organ or faculty which removes its subject from one species to another. But to suppose that the continued de-

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* Mr. Lyell has devoted several chapters to the investigation of this theory, as propounded by Lamarck and others, and thus concludes his examination: "For the reasons, therefore, detailed in this and the two preceding chapters, we draw the following inferences, in regard to the reality of *species* in nature.

"First, That there is a capacity in all species to accommodate themselves, to a certain extent, to a change of external circumstances, this extent varying greatly according to the species.

"2dly. When the change of situation which they can endure is great, it is usually attended by some modifications of the form, color, size, structure, or other particulars; but the mutations thus superinduced are governed by constant laws, and the capability of so varying forms part of the permanent specific character.

"3dly. Some acquired peculiarities of form, structure, and instinct, are transmissible to the offspring; but these consist of such qualities and attributes only as are intimately related to the natural wants and propensities of the species.

"4thly. The entire variation from the original type, which any given kind of change can produce, may usually be effected in a brief period of time, after which no further deviation can be obtained by continuing to alter the circumstances, though ever so gradually,—indefinite divergence, either in the way of improvement or deterioration, being prevented, and the least possible excess beyond the defined limits being fatal to the existence of the individual.

"5thly. The intermixture of distinct species is guarded against by the aversion of the individuals composing them to sexual union, or by the sterility of the mule offspring. It does not appear that true hybrid races have ever been perpetuated for several generations, even by the assistance of man; for the cases usually cited relate to the crossing of mules with individuals of pure species, and not to the intermixure of hybrid with hybrid.

"6thly. From the above considerations, it appears that species have a real existence in nature, *and that each was endowed, at the time of its creation, with the attributes and organization by which it is now distinguished.*"—Vol. II. pp. 67, 68.

sire to stand upright, and the experiment, often tried, to walk erect, produced that perfection of ingenious arrangement which the bones of the foot display, that by the efforts of many generations fingers grew out of the hand, furnished with all their joints, and muscles, and tendons; and that, to render it complete, a thumb grew up, just in the very situation and acting in the only way in which it could give the hand its use and power,—to suppose that the curious machinery of the ear was formed by the long-continued attempts to catch and distinguish the vibrations of the air;—and that all the exquisite apparatus of the eye, with its coats and humors, and nerves, and muscles, and self-adjusting iris, was produced by frequent attempts at seeing,—is completely the romance of science; and such a romance as, certainly, is not outdone by all the wild fictions of the Arabian Nights, or the ludicrous extravagancies of Lilliput or Brobdingnag.

The Epicurean philosophy, however, takes a position the reverse of this, and assumes that the existence of appropriate parts, accidentally formed, led to their respective uses.* So far from admitting the wisdom of a Su-

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* See Lucretius, de Rer. Nat. IV. 821, 823, which passage thus concludes—

> "Nihil ideo quaniam natum est in corpore, ut uti
> Possemus; sed, quod natum est, id procreat usum."

Dr. Mason Good, in his translation of Lucretius, with notes, &c. endeavors to explain this and almost all the atheistical peculiarities (or what others have considered such) of his favorite author, in such a way as shall not be incompatible with Christianity. In this, however, the author pre-

preme Being in the production of these wonders, this system teaches that the newly-formed earth, strong and vigorous in those days of its youth, produced men, as well as animals of every description, with as much ease as it now brings forth flowers and corn; that, in the accidental concurrence of the primary atoms, all manner of shapes and forms, and monsters of every kind, came into being, but that all those productions which possessed not parts and organs suitable to the maintenance of life naturally perished;* and that therefore the existence of all the beautiful and necessary mechanism to which we have frequently adverted, is no proof of a wise and benevolent design, but the mere result of such accidental formations as enabled the primitive species to maintain their existence and propagate their kind.† We have already pointed out the absurdity of supposing that such parts and organs as exist in the animal

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sumes to think he has completely failed. The work alluded to, gives ample proof of the vast extent and variety of the excellent Dr.'s learning, and his great ingenuity in the application of it; but while he has successfully defended Lucretius and his great oracle Epicurus from many charges ignorantly or maliciously advanced, he has, the author of these lectures ventures to think, proceeded much further than truth and justice required.

* De Rer. Nat. v. 835, &c.

† This is one mode of reply to the argument from design which Mr. Hume puts into the mouth of his Philo.—Dialogues concerning Natural Religion, ed. 2d, p. 153.—"It is in vain, therefore, to insist on the uses of the parts in animals or vegetables and their curious adjustment to each other. I would fain know how an animal could subsist, unless its parts were so adjusted," &c.

economy, and especially in man, were not designed for their appropriate use. Can it be seriously believed by any one who is not fond of paradox or enslaved by prejudice, that the ear was not formed for hearing, nor the eye for seeing, nor the heart, with its arteries and veins, for circulating the blood, nor the chest and lungs and air-vessels for the office of respiration,—or that such inimitable exhibitions of skilful adaptations should be the result of mere chance? It would be a sufficient reply to such an hypothesis to say that it is completely gratuitous; that it has no data, nothing but conjecture on which to rest. But this is not all; it is conjecture which involves the greatest improbabilities. Among the monstrous shapes which, it is assumed, thus sprung accidentally into being, those only are supposed to have become extinct that possessed not the means of maintaining life or of perpetuating their species. But, on this supposition, thousands of monstrous shapes, belonging to every species, might have existed in a condition capable of propagating races of monsters, without their defective, or superfluous, or misshapen parts necessarily producing extinction of their kinds. In such case, might we not have expected that such monsters would have been seen, and have reached our own times?—that races of men would have been known with one eye, or three eyes, or eyes in a less convenient position,—or men with an additional pair of arms, or only one, and that of a different form,—or even men with several heads, and an endless variety of superfluous members and grotesque shapes? Instead of this, we find but one unvarying type of a human pair, with such varieties only as different food and climates produce, or such occasional variations as arise from some accidental causes, and presently disappear. On such fantastic improbabilities argument is wasted.

It is scarcely necessary to notice an attempt that has been sometimes made to invalidate such proofs of design as we have adduced, by alleging that whatever exists must exist in some form or mode; and that in whatever other forms or combinations it might have existed, we might with equal reason have attributed it to design. Surely a fallacy so gross can mislead no one. Who can conceive for a moment that the necessity of matter's existing in some form and place, can account for the complicated structure of a single plant or flower, to say nothing of the innumerable wonders of the human frame? Apply this mode of reasoning to St. Paul's cathedral, which contains not the thousandth part of the instances of skill and intention which the corporeal structure displays;—all the matter which composes the stones, and mortar, and brick work, and marble, and wood, must necessarily have existed in some form, and why not in this? Would the man be deemed sane that should seriously reason in this manner?

A sceptical writer of considerable celebrity has endeavored to show that, notwithstanding all the multiplied instances of "order, arrangement, or the adjustment of final causes," no conclusion can be drawn in favor of the existence of a designing mind. "Matter may," he observes, "contain the source or spring of order originally, within itself, as well as mind does."* Is not this an attempt to confound things which the author admits are different, in order to support a sceptical philosophy? Mind and matter are admitted, throughout the whole of the argument, to be distinct. And what, we ask, is more essentially the characteristic of mind, as distinct from matter, than the power of arranging, selecting, intending, and adapting means to ends? And yet this author would insinuate that matter may possess these identical properties. He might as well have said, "for aught we know *a priori*," thought may have dimensions, and a volition be green or blue. But on what authority is such a supposition made? We know that mind originates order; what evidence have we that arrangements and adaptations originate in matter? Yet this writer seems so pleased with this idea, that he introduces his favorite character as saying, that he esteems no system of cosmogony "more plausible than that which ascribes an eternal inherent principle of order to the world." * Of this he speaks with the highest confidence; "this at once solves all difficulties." † But what is meant by this "principle of order," which, eternally inherent in matter, is to account for all the exquisitely curious workmanship of the human frame, together with all the wonderful adaptations that we per-

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* Dialogues concerning Natural Religion, by D. Hume, Esq. p. 55. The author, indeed, says, "for aught that we can know,

a priori, matter may," &c. But is not this mere trifling? To what purpose is it in this argument to talk of what may or may not be known of matter *a priori*, when it is constantly before us, and we have the means of ascertaining its properties by observation and experiment?

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* Dialogues concerning Nat. Rel.—pp. 124, 125.

† P. 125.

ceive throughout nature? If it means any thing that bears on our argument, it must mean that matter has an inherent power of arranging and combining its various particles so as to form adaptations of the most curious and complex nature, which answer the most benevolent ends, and that with a certainty and precision which would do honor to the highest wisdom. What is this but to invest matter with the attributes of mind, and to pretend to account for all the marvellous adjustments which we have noticed, without admitting the existence of an intelligent Creator, by saying that we have only to suppose matter to possess all the properties of mind, and then it could accomplish what we now see effected by mind only! "How could things have been as they are," he asks, "were there not an original, inherent principle of order somewhere, in thought or in matter?" Certainly there must exist a power capable of producing all the wise arrangements and beautiful order which we every where behold; with this sentiment all must agree. But when he adds "it is very indifferent to which we give the preference," reason recoils, and we shrink from the bold absurdity. "Indifferent" whether we assign all the wonders of the human frame, with those with which the whole world is replenished, to matter or mind—to a being of infinite wisdom, or to what has no intelligence, no perception, no power to will or choose, but which acts only as the sport of random chance or the slave of blind necessity! It may have been "indifferent" to an author, to whom uncertainty on the most momentous subjects seemed delightful, and doubt the highest attainment of philosophy; but

I believe it will be indifferent to no one who does not prefer an ingenious paradox to the decisions of common sense, or a dexterous sophism to truth which every sober-minded man can perceive. This writer, in justification of such an hypothesis, affirms that there is as great difficulty, even admitting the existence of an infinite mind, in supposing it to originate the most exquisite arrangements, as there is in supposing that they may result from mere matter; but this position, when divested of the profane flippancy with which it is announced, is a paradox so obviously absurd, a fallacy so gross, that it is difficult to conceive that its own author believed it.

When pressed with those innumerable instances of evident design, which, in the structure of man and through every part of the economy of nature, are so strikingly exhibited, and to which nothing approaching to a satisfactory answer has been given by the most refined sophistry which infidelity has displayed, the advocates of scepticism endeavor to cover their retreat, by perplexing us with difficulties respecting the mode of existence, and perception, and action in the Divine Being.* From the nature of things it is impossible that we should form adequate conceptions of a being so exalted as the Great First Cause;—how can that which is finite comprehend infinity? If we find traces of infinite wisdom and power, there must be a being who possesses these attributes, and no difficulty which we feel in conceiving of his mode of existing or acting can at all affect the conclusion that such a Being does exist.

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* A great portion of Mr. Hume's 'Dialogues on Natural Religion' are of this kind; the object of which is not so much to prove that there is no God, as to produce a complete scepticism on every momentous and practical question relating to his existence and character. His aim is to perplex, not to elucidate,—to pull down every thing, to build up nothing,—not to elicit truth, but to throw every thing into uncertainty and doubt. To accomplish this, Mr. Hume certainly possessed requisites of a very high order; to considerable attainments in literature he added

To refer the works of nature to design, implies, it is said, a degradation of the Supreme Being,* by asserting "a resemblance between the Deity and human creatures;" this the bold sceptic calls "anthropomorphism;" a heresy which sprang up in the dark ages of the church, and which assigned to the Deity a human form. Is, then, this author really concerned for the honor of the

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the beauties of style, a polished wit, and a great metaphysical acuteness. His very deficiencies were such as to heighten his qualifications as the advocate of scepticism. To the moral susceptibilities of our nature he seemed as much a stranger, as, it is said, he was to a taste for music, or a susceptibility to the refined pleasures of conjugal love. Hence he could sport with wanton levity on subjects of the most awful interest, employ his wit in endeavoring to render God and a future state ridiculous, while he advocated the probable existence of both; and, with much that was valuable as a friend and companion, exhibited a specimen of what scepticism could do, in teaching a man *to live doubting*—and *to die joking!*

* Dialogues on Natural Religion, by Mr. Hume, p. 57; and System of Nature, Vol. II. p. 181.—"We cannot form the most slender idea of the particular nature of that wisdom" (i. e. that formed the world;) "because if we were for an instant to assimilate it to our own, weak and feeble as it is, we should be from that moment in a state of contradiction."

Great Supreme,—is he so anxious that men should form exalted and honorable ideas of him? Throughout the whole work from which we have made quotations, he hesitates not to treat him, his attributes, and works, with the greatest levity; with a jocose familiarity, intolerable even in a confirmed sceptic. But there is another object in view, which is intended to serve the purposes of infidelity; it is to show that we cannot draw any conclusion in favor of a designing mind from the works of nature, without implying such "a degradation" as is utterly incompatible with our idea of a Divine Being. But what degradation does it imply, to assert that the Great Supreme possesses in unlimited perfection what his creatures, by his own gift, possess in a limited degree? Surely wisdom is wisdom, and power is power, in whatever degree they may exist, and however they may be exhibited, in all the gradations from the feeblest creature that is capable of their exercise, to the boundless perfection of the uncreated mind. The objection is, therefore, frivolous, it leaves our argument untouched. The only legitimate inference from a comparison of the works of man with those of nature is, that an intelligence exists inconceivably more perfect than that which man possesses, and that a wisdom immeasurably surpassing all that is human, must have been combined with the power that created man and all the wonders of the universe.

By the professed advocates of atheism, an objection of this kind is sometimes carried still farther, and attempts are made to prove that there is an absurdity involved in the idea of an *intelligent* Creator and Governor of the universe. "An intelligent being," says one of these, "is one who thinks, who wills, who acts, to compass an end. If so, he must have organs, an aim, conformable to those of man; therefore, to say that nature is governed by intelligence, is to affirm that she is governed by a being furnished with organs, seeing that without this organic construction, he can neither have sensations, perceptions, ideas, thoughts, will, plan, nor self-understood action." * In the same strain objections are frequently urged by this writer, with the evident design of forcing those who believe in a Supreme Intelligence to the dilemma of either admitting that there must be an infinite and self-existing being with bodily organs, which is the absurdity of anthropomorphism, or of abandoning the belief in the existence of any intelligent being distinct from the material world. But if an intelligent being is one "who thinks, who wills, who acts to compass an end," then, on this writer's own showing, if we see "an end," accomplished by means which discover intended adaptation, or, in his own phraseology, "an end compassed," the existence of an intelligent being to compass that end must be admitted, whatever other consequences may follow. I appeal, then, to every one who has marked the instances which we have adduced of contrivance, adjustment, precaution, whether there is not, in the structure of man and in his relations to external nature, overwhelming proof of ends, accomplished in this way, and which necessarily require in their accomplishment properties which only an intelli-

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* System of Nature,—Vol. I. p. 115.

gent being can possess? The conclusion, then, is inevitable, an intelligent being exists superior to nature, and to whom all the works of nature are to be referred. There is, also, in the argument this fallacy: because the human mind thinks, and wills, and acts, by means of bodily organs, therefore, no being can exist who can think, and will, and act, without such organs; that is, if there be a Creator, he must necessarily be in all respects like the creature; than which, a more illogical inference was never drawn. A self-existent, independent, eternal being, such as the Great First Cause must necessarily be, must be immeasurably superior in his nature and mode of acting, to any creature which he has made. Scarcely will the most confirmed materialist maintain that thought and volition, however they may originate, are themselves material, and yet these operate on matter, and in some mysterious manner move the limbs; what, then, is there unreasonable in the conclusion, that the Great Being who formed man possesses all the properties of mind in the highest perfection, without those corporeal organs which, while they are the medium by which the mind acts, at the same time limit and check its operations. We see instances of skill, spread over the whole of nature, so surpassing all that human intelligence can contrive or invent, that the conclusion is irresistible there must be a contriver, a designer, infinitely superior to all human beings in the attributes of mind; and this conclusion cannot be invalidated by the difficulty which, in the nature of things, we ever must feel in forming adequate conceptions of the manner in which infinite power and intelligence put forth their energies.

Such, then, my respected auditors, are the principal objections which are made by atheistical writers to the line of argument which, in the two last lectures, we have taken. It is scarcely necessary to remind you that there is no proposition, however well supported by evidence, mathematical demonstration only, perhaps, excepted, to which ingenuity may not oppose its objections, and against which, sophistry may not urge its cavils. We have, I think, fairly met these objections, and allowed them all their force; and I appeal to your own understandings whether, upon a dispassionate review, they do not appear, in comparison with the evidence which we have adduced, "lighter than vanity." Nothing that the liveliest fancy can imagine—nothing that ingenuity can invent—nothing that the most brilliant talents, aided by the whole circle of the sciences, can offer to our notice, can explain the innumerable wonders which surround us, but the existence of an eternal, an all-wise, and infinitely powerful Creator;—this accounts for all, and throws over the whole frame of nature a transcendent glory, gives to it an unspeakable charm. In the assurance of this delightful truth every object glows with new beauty, every department of nature is invested with additional interest. How comparatively blank and dreary is every thing in this wide world, when regarded as the offspring of chance, or the result of unconscious undesigning physical causes, operating by "necessary laws." But, viewed as the product of infinite wisdom and benevolence, the whole frame of nature forms a delightful source of the purest pleasures to the contemplative mind, and instead of damping his joy by the recollection that it is, after all, but a "fatherless world," it gives full scope to boundless admiration, and fills the glowing heart with cheerful gratitude. Let me indulge the hope, that, while those who have acknowledged and adored the great Creator feel their devotion quickened by such views as we have taken of his works, many who have hitherto been misled by a false and dangerous philosophy will be prepared, in future, to unite in the pious sentiments which one of our most illustrious bards puts into the mouth of the newly created pair.

"These are thy glorious works, Parent of Good!
Almighty! thine this universal frame,
Thus wonderous fair; thyself how wondrous then!"
Milton's Paradise Lost.—B. v. 152, &c.

LECTURE V.

THE VIEWS WHICH NATURE TEACHES US TO FORM OF THE SUPREME BEING.

ROMANS I. 20—"FOR THE INVISIBLE THINGS OF HIM, FROM THE CREATION OF THE WORLD, ARE CLEARLY SEEN, EVEN HIS ETERNAL POWER AND GODHEAD."

THESE words are extracted from an epistolary communication addressed by Paul to the Christians at Rome, at that time the metropolis of the world, the centre of the arts, and the focus of all crime. The apostle alludes, in the connection of our text, according to the opinion of some commentators, to those philosophers and statesmen who, though they plainly saw the follies of polytheism, and knew that there was but one true and living God, still sanctioned all the absurdities and immoralities of heathen worship, and "when they knew God, glorified him not as God." He therefore represents them as, on this account, the more inexcusable; for he adds, "the invisible things of him, from the creation of the world, are clearly seen, even his eternal power and Godhead." That is, by the works of creation, the glories of his nature, though invisible, are so clearly apparent, being reflected as it were in a mirror, that these philosophers were exceedingly criminal in not publicly recognizing him themselves, and by their teaching and example leading others, whose debasing superstitions they rather encouraged, to 'glorify him as God."

To engage in investigating the character and perfections of him, "of whom, and through whom, and to whom are all things," as it is the sole prerogative of man, among all terrestrial beings, so it is one of the noblest exercises of human reason. To neglect inquiries of this kind is unworthy a human being, and is quite as irrational as it is irreligious. But it is often asserted by atheistic writers, that even if the existence of a Supreme First Cause as the Creator of all things be admitted, it is impossible that we can know any thing about him; and that every idea we form of him is not merely inadequate and imperfect, but altogether chimerical and vain.* This, then, is the point to which we shall now address ourselves; and we hope to show that, notwithstanding the utter incompetency of creatures whose powers are so limited as our own, "to find out the Almighty to perfection," we can yet gain such glimpses of his boundless glories from the works of nature as should fill our minds with admiration and awe, can obtain such information as is of the greatest practical importance, and as should engage us in those momentous inquiries which can be met only by a further revelation.

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* Repeated assertions to this effect are to be found in the works of infidelity already quoted; they are common in the 'System of Nature,' and Mr. Hume labors, with all his accustomed ingenuity, to prove it.

As I am now reasoning with those, principally, who do not regard the authority of the sacred scriptures, it would be of course irrelevant to appeal to these venerated writings. Yet, I am fully aware that in reasoning on the attributes of the Great Supreme, we cannot divest our minds of the information which we have received from this source. We cannot, whether believers or unbelievers, place ourselves exactly in the circumstances of those whose views of a Supreme creating and governing Power have not been corrected and expanded by the contents of this precious volume. It is well known that, in the opinion of many of the greatest learning and research, even the pagan philosophers were indebted for some of their most exalted views of the Deity to information received more or less directly from the ancient writings of the Jews. But our argument will not be affected by this consideration, though our inquiries may be more extended, and our views of what nature teaches more enlarged; as we shall not ground any position on the authority of the sacred writings. We may, indeed, be qualified, by the instruction thus received, to interrogate nature with advantage; we may be assisted in interpreting her language; but it is to "the things which are seen," the visible wonders of "the creation," that we shall make our appeal respecting "the invisible" glories of their Maker; it is on fair, legitimate reasoning on these works, that we shall found all that we shall now advance respecting their author.

It is scarcely necessary to apprise my hearers that, at this stage of the inquiry, proofs must not be expected of the existence of God; these have already been exhibited, I trust, with ample sufficiency. I must throughout this lecture, then, assume this point; the existence of a Great First Cause, the Creator of all things, being admitted, our question now is, what is the information which nature can supply respecting the author of the universe? Our present inquiries, therefore, will relate to the NATURE, CHARACTER, and GOVERNMENT of the Supreme Being.

Let us, in the first place, with all reverence, inquire what views we should form of the NATURE of the Great Supreme. The existence of an intelligent First Cause being admitted, it necessarily follows that this great Parent of all existence must be eternal, that is, without beginning. The first cause can have no antecedent. Nothing can be admitted to have produced that which itself produced all things. However mysterious and difficult of conception existence without beginning may be, we are compelled to arrive at this point, and cannot avoid it. To account for the present existence of the world, atheism itself is forced to admit that something was eternal, and assigns that attribute to matter and motion. But we have proved that matter could not have been the great originating cause; and are therefore necessarily brought to the conclusion that the Creator is without beginning, that is, eternal. How awfully sublime is this view of him, to whose existence the duration of man, of ages, of empires, of worlds, is but a moment.

The same glorious Being must have underived, independent, and necessary existence. That which is before all can be derived from none; that which is derived from no other being, but on which, as the First Cause, all must be dependent, must be independent of all, and have self-existence. He whose existence is not dependent, nor has the ground or reason of such existence in any other being, but has existed from eternity, is not in his being contingent, but necessary; that is, he cannot but be what he is, to suppose him non-existent, is as much a contradiction as to suppose that a thing is and is not in the same sense and at the same instant.* This is the true idea of necessary self-existence.

The Great Eternal must also be infinite; we can assign to him no limits, either in duration or space. Boundless as is the universe to our perceptions, it must necessarily have limits: form is essential to matter, and form cannot exist without boundaries. But the mind cannot conceive of any limits to him who gave birth to the universe. His necessary existence must, as far as we can perceive, be necessary in every point of space, as well as in every moment of duration. As we have before had occasion to remark, we cannot resist the impression that both eternity and infinity exist; we cannot possibly suppose limits to either duration or space; and we can conceive of nothing to which such properties can belong, but him who is the self-existent First Cause of all things. We cannot, therefore, but consider the Eternal Being as also infinite. "Great is the Lord, and his greatness is unsearchable." How insignificant is the whole universe, when compared to him.

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* "Although necessity of nature may express the manner in which an Eternal Being exists, yet it can be no cause of any existence whatever."—Drew on the Existence and Perfections of God. Vol. II. p. 154.

From the same reasoning, it follows that the Supreme Being is immutable. No power exists extraneous to himself, which can produce a change on him. Nor can it be supposed that he would effect a change in his own nature. To will a change to an inferior condition is impossible; to be in a superior condition is equally an impossibility. We cannot conceive of any perfection which the Eternal First Cause of all things does not possess; therefore, a change for the better or the worse is equally impossible. That which has necessary existence, that is, is what it is necessarily, cannot change, since this is to suppose that it is necessary and not necessary at the same time, which is a contradiction. The face of nature may be ever changing, the life of man is subject to a thousand variations, generations may pass away, empires rise and fall, worlds may perish, suns be extinguished, and systems annihilated, while the great and adorable Supreme remains "without variableness or the shadow of a turning."

The omnipresence of the Deity seems also to follow from the views which we have taken. As all things are created by him, and dependent on him, we cannot conceive the absence of the supporting cause from that which it upholds. Through every part of the human frame there is a mysterious and unknown something which we call life, the pervading influence of which is every where necessary, and every where present; the instant in which it ceases in any part, or in the whole of the bodily structure, disorganization commences. Though every comparison must necessarily be inadequate to give a proper idea of the dependence of all created beings on the great Creator, yet in some such way we may conceive that he is present with all his works, "upholding all things by the word of his power." Since by the immensity of his nature he fills and includes all things, and has no limits, he must be every where. The presence of matter does not exclude him, distance of space cannot remove us from him. He is alike at the surface and at the centre of the globe,—on the land and on the sea,—within us and without us. He is present to every particle of our bodies, and every movement of our minds, on every part of this globe, and at every point in the regions of boundless space. Is it any wonder that a pious mind should exclaim with devout admiration, "Whither shall I go from thy spirit,—or whither shall I flee from thy presence? If I ascend into heaven thou art there; if I make my bed in hell, behold thou art there. If I take the wings of the morning, and dwell in the uttermost parts of the sea, even there shall thy hand lead me, and thy right hand shall hold me. If I say surely the darkness shall cover me; even the night shall be light about me. Yea, the darkness hideth not from thee; but the night shineth as the day; the darkness and the light are both alike to thee. Such knowledge is too wonderful for me; it is high, I cannot attain unto it." *

This great and infinite Being, we also conclude, is a spirit. We cannot, we readily admit, adequately conceive of an infinite spirit; yet that such is the Divine Being, the Great First Cause, we are compelled to believe. What spirit is, whether finite or infinite, created or uncreated, we do not attempt to explain; we only know some of its properties. And what more do we know of matter? By means of our senses, we ascertain that it is something which has extension, solidity, and divisibility as its properties; but it is not extension, nor solidity, nor divisibility—not any one, nor all these, or other properties which it may possess, put together. What is, then, that something of which these are the qualities?—What is that substance, in which these properties inhere? This we know not, nor are we likely in the present state ever to know. Spirit is that which perceives, thinks, wills; but, what is its essence, we know no more than we do, what is the essence of matter,—and we know just as much. When, therefore, we speak of the Divine Being as a spirit, we mean that he is a being who perceives, wills, acts; but that the properties of matter, such as form and divisibility, do not pertain to his nature. That the Great First Cause does not possess material properties must follow, from the views which we have already taken. Matter is

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* Psalm cxxxix.

ever changing; he who has necessary existence is immutable, and, therefore, is not material. Matter has form, and cannot be infinite; he whose nature is infinite cannot be material. Matter is entirely an object of sense; it is only by our bodily senses that any of its properties can be perceived, or its existence ascertained. It is only by our own consciousness that we become acquainted with the existence and properties of our mind or spirit; and by the testimony of others as to their consciousness, and our perception of acts similar to those which attend our own mental operations, that we judge of the existence of such a spirit in them. The Deity is not, cannot be, an object of sense, and cannot, therefore, be material. If, then, it be said, why should we believe in the existence of a being which cannot be an object of perception by our senses? we reply, because we see throughout nature innumerable results which none of the properties of matter can account for. We see effects which only intelligence, wisdom, design, could produce;—we have given ample proof from these, that an intelligent Creator exists; and since there is indubitable evidence of an Intelligent Existence, which yet cannot have the properties of matter, we are justified in speaking of the Deity as immaterial, in concluding that he is a Spirit. From the nature of the case, an infinite, uncreated, self-existent spirit must possess properties very different from those of the human mind, and those which such a being possesses in common with any of his creatures must be inconceivably superior. There cannot, of necessity, be any being altogether like him; so that, as we have before remarked, to argue from the limitations and defects of the human mind to the infinite and self-existing Being, is neither fair nor philosophical. To say, that we cannot conceive how an infinite Spirit can exist and act without corporeal organs, is one thing; to deny the possibility of it is another. If we believe in the existence of those things only, the nature and properties and mode of existence of which we can fully understand, our belief will be reduced within very narrow limits. To object, therefore, to the spirituality of the divine nature, simply, because we cannot comprehend it, is altogether unreasonable, and is a principle on which no atheist does act or can act. In a thousand instances we do not hesitate to give our full belief to a fact which yet involves many things completely incomprehensible to us. All that we require in such cases is, that there should be proof or evidence of the fact. If, therefore, it be proved that there is a First Cause, possessing the highest attributes of mind, and if it also appears that this First Cause does not possess the properties of matter, both which, we conceive, have been undeniably shown, then, whatever difficulties attend our conceptions of so exalted a being, it follows that the First Cause is immaterial, or, in other words, that the Creator of the universe is a Spirit, and "the Father of our spirits."

Another view to which our contemplations on the works of nature seem necessarily to lead, is, that this great Being is the only God. Having once proved the existence of an eternal and intelligent Creator, we have a cause sufficient to account for the existence of the universe, with all the beings, and provisions, and arrangements, which it contains. We have no need to have recourse to any other power; all other agency is superfluous. If, as it has often been justly remarked, any person should affirm that there is a plurality of Gods, the burden of proof would lie on him. It is an assumption without any thing to support it. Look through all nature; as far as we can extend our observations, unity of design and harmony of operations are every where apparent. Take one single being, from any department of organic nature; a flower, a tree, an insect, a quadruped, a man; in each individual there is a complexity of parts, and organs, and functions; but all this diversity is, in the most obvious manner, working with perfect harmony to one end. Look at the relation of each individual species to others of a different rank or order, and of all to external nature in general, and the same idea is impressed on the mind. Look, indeed, through the whole system, and what other view can be consistently taken? From the sun to the remotest planets, from the surface of the earth to its centre, you see one law operating with undeviating uniformity—the law of gravitation. It is this power which, nicely balanced with the projectile force, maintains all the relations of the vast bodies of the solar system; it is this which binds the earth into a solid mass; the operations of which are alike seen on the land and on the sea, on the atmosphere which surrounds the earth, the vapors which rise, the winds that blow, and the rains that fall; in every world, and every atom, we see the effects of this great principle. No one can attentively view all the arrangements which exist throughout the whole economy of nature, the connection of every part with the others, and its dependence on the whole, with the wonderful harmonies which attend the working of the entire system, without being struck with the unity of design which is every where apparent, and feeling, if he is prepared to acknowledge any Creator at all, "that there is one God, and there is none beside him." The supposition that there is more than one eternal, self-existent, and independent Being, is not only perfectly gratuitous, but seems to shock the mind and to repel belief; and it is much to be doubted whether ever such an opinion was sincerely entertained.* Among all the varieties and absurdities of ancient polytheism, we never meet with such an idea. In all the pagan mythologies, we see traces of one Supreme Being, with a number of subordinate divinities; all the philosophers of antiquity, who maintained the existence of any Deity, appear to have considered the Eternal Being as only one. "In so great a contention and variety of opinions," says a celebrated heathen philosopher, "herein you shall see the law and reason of every country to be harmonious and one; *that there is one God*, the King and Father of all. That the many are but the servants and co-rulers unto God. That herein the Greek and the barbarian say the same thing; the islander and the inhabitant of the continent." *

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* "For if we suppose more than one," (i. e. God,) "it is plain, since the attributes of infinite power, knowledge, and goodness include all possible perfection, that they must be entirely alike to each other, without the least possible variation. They will, therefore, entirely coalesce in our idea, i. e. be one to us.—Since they fill all time and space, and are all independent, omnipotent, omniscient, and infinitely benevolent, their ideas cannot be separated, but will have a numerical, as well as a generical identity. When we suppose other beings generically the same, and yet numerically different, we do, at the same time, suppose that they exist in different particles of time or space; which circumstances cannot have place, in respect of the supposed plurality of infinite beings. We conclude, therefore, that there is but one Infinite Being, or God."—Hartley on Man, p. 341, ed. 6th.

We shall now proceed to consider what information we may derive from the works of nature, in addition to what we have already noticed, respecting the CHARACTER of the Divine Being. By the character of God, I here mean those qualities which pertain to him and distinguish him, by which his acts are regulated and determined. These have frequently been denominated the attributes or perfections of Deity, and have been considered as either natural or moral; the former indicating his capabilities of acting, the latter, the manner in which these capabilities are employed. The term natural is thus applied to the means which a rational being possesses of accomplishing his will; while the properties which mark his actions as good or bad, as directed to a proper or improper end, are designated his moral qualities. When we speak of these as properties of the glorious Being who is at the head of the universe, we call them his attributes, and because they are conceived to dwell in him in the highest perfection, we speak of them as his perfections.

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* Maximus Tyrius, Dis. I. as quoted by Howe in his 'Living Temple,' Part I. ch. ii. sec. 2. Maximus Tyrius was a philosopher of considerable celebrity, who, though a native of Tyre, obtained very high distinction in Rome for his learning and talents, where he taught in the second century, during the reign of the philosophic emperor Marcus Aurelius.

The natural attributes of the Deity may, perhaps, all be comprised under his WISDOM and his POWER. What, then, does nature teach us concerning these?

One of the first impressions which we receive from a comprehensive survey of the works of God is, that he is infinitely wise; that is, that wisdom exists in him without any assignable limit, in its highest possible perfection. Knowledge is absolutely essential to wisdom, and, indeed, forms its very element. Knowledge and wisdom may be separable in men; they are identified in the Supreme Being. Men may have knowledge on many subjects of a speculative nature, and be very deficient in what relates to human conduct; such cannot be wise. Wisdom is exhibited by the selection of proper ends, and of proper means by which they are to be accomplished. Though wisdom, as resulting from extensive observation and long experience, may be possessed, with ignorance of a thousand subjects, yet it always supposes knowledge of those subjects to which it relates. In fact, wisdom is only knowledge considered in a practical view. In the Divine Being, therefore, perfect knowledge must be the perfection of wisdom. He who perfectly knows all things, in their nature, their relations, and consequences, must know on every possible occasion what is best to be done, and the best way in which to accomplish it. As we have proved that the Great First Cause is an intelligent Being, his knowledge must be universal in extent and perfect in its kind, and consequently infinite wisdom, or wisdom in its highest possible excellence, must be his.

He who created all things must have a perfect knowledge of all things, since they all received with their existence their peculiar powers and properties from him. It must also be apparent, from what we have already shown, that he must be acquainted with every thing existing at any one time, since he is omnipresent. He must, therefore, intimately know all beings that exist, with all their properties; all the combinations of matter in suns or planets, or men, or worms, and all the individual particles of matter, wherever they exist, and equally all that mind is, in its innumerable diversities, and in its most secret workings. And as he has ever been present with all that is past, and possesses none of those defects which pertain to finite minds and bodily organization, he must know every thing that has transpired in the great universe from its first formation. He must know the size, and place, and history of every atom, in all the combinations it has undergone from its first creation; together with every action and every motive, every volition and every imagination, every word and every thought of every individual that has lived, and spoken, and acted, since the formation of the first man. And all the future must be known to him; for, as he gave to matter all its properties and laws, he must know the effect which every cause will produce throughout the whole course of nature, and, consequently, all the results of the first creation. And as even in the mind, with all its waywardness and apparent irregularities, there is nothing absolutely contingent, but one thought or feeling leads on to another and is linked with it; and as certain states of mind, in certain circumstances, lead to certain actions, he must know with equal certainty what all the purposes, and thoughts, and motives, and actions of every intelligent being in the universe will be. It follows then, necessarily, that as the great Supreme knows always what has been, and is, and will be, in the most perfect manner, he knows what is the best end and what the best means by which it should be effected; what in every case ought to be done, and how it should be done; and this is the highest possible wisdom.

It is unnecessary to remind you how completely these reasonings are supported by our observations on the whole frame of nature. How exquisite and innumerable are the instances of divine skill in the human frame; how diversified are the exhibitions of this divine attribute in all that flies, or creeps, or swims! In all the chemical and mechanical properties of matter, in all the varied combinations of the constituents of this globe, the properties peculiar to each, the laws which govern them, and the purposes which they serve,—in the system as a whole and in its minutest parts, the contemplative mind cannot fail to behold traces of the most consummate wisdom, and with sentiments of devout admiration to exclaim,—"The heavens declare the glory of God, and the firmament showeth forth his handy work."—"The earth, O Lord, is full of thy riches."

That the Creator is a being to whose POWER no bounds can be assigned, is equally evident from his works. How great their number, how surpassing their variety! The existence of any one single species, either of the vegetable or animal kingdom, is a display of power which leaves every thing that can be accomplished by human effort at an immeasurable distance. All the energies which man can command, though concentrated in one single act, and aided by all the resources of human art, would be as incapable of producing the smallest insect as they are of removing the world, or of stopping the planets in their orbits. And how wonderfully varied are the tribes of living beings, rational and irrational, that inhabit the forest or tenant the deep, that soar in the air or creep on the ground? And who shall number all the diversities and wonders of the vegetable kingdom? How astonishing and how various are the powers with which the great Creator has invested the material agencies which we see at work, either in the regular course of nature or in its occasional deviations! Before these man feels his insignificance, stands in awe of that omnipotent energy of whose will they are the ministers, and confesses that he is as "nothing and vanity." How deep are the emotions, how overpowering is the awe with which a contemplative mind beholds the bosom of the ocean heaving with its tides, or roaring and foaming with its mountain billows; or watches the clouds of heaven in a gathering storm; or listens to the reverberations of the deafening thunder; or marks the ravages of the wild tornado; or trembles at the earthquake, and stands aghast at the awful exhibitions of volcanic power! "Lo, these are parts of his ways; but how little a portion is heard of him? But the thunder of his power who can understand?"

But all the wonders of this world, innumerable as they are, form but a very small part of what we should behold, were we capable of taking in the mighty whole. The universe is the scene of Divine operations. Our own globe is but a small spot in this vast field of wonders—but one among a countless host. Who can number the stars of heaven, or even imagine the untold myriads of those celestial bodies, which, though glimmering through the night as luminous specks, or seen only by the highest magnifying powers of the telescope, appear to be central sources of light and heat to as many systems of worlds?

Think for a moment on the great and the minute in creation, and be astonished at the exhibition of Divine power. We are lost in the contemplation of either. What a vast ball is this globe, about twenty-four thousand miles in circumference, spinning on its axis with unceasing and most uniform velocity; and at the same time flying round the sun at a mean rate of about fifty-eight thousand miles an hour. But yonder planet which traverses the plains of ether, which we sometimes call an evening star, is one thousand four hundred times the size of this globe; and the sun, the centre of the system, much more than a million times as large. Consider, again, the mighty sweep which that stupendous orrery, the Solar System, takes. The earth describes an orbit of nearly six hundred millions of miles; but far beyond this, Mars, Jupiter, Saturn, and the Georgian planet perform their revolutions; the latter at such a distance from the centre that a cannon-ball, if it could continue its speed, would be one hundred and seventy years* in passing from the sun to that planet; and a flash of lightning from the sun's disc would be two hours and a half before it could be seen in the regions of that distant globe. And if these are the distances of the parts of one system, what must be the whole? How overwhelming is the thought of such immensity; how awful is the idea of such a power! Look now at the minute. In human efforts we seldom see delicacy and energy combined. The ship-builder and the watchmaker cannot work with the same tools; the habits of each would disqualify him for the employment of the other. The skilful engraver, with his delicate instruments, cannot make canals and aqueducts and rail-roads and tunnels; and the civil engineer, with all his apparatus for constructing bridges and water-works, cannot prepare the nice adjustments of a chronometer, or mark the exquisite divisions of some of our optical instruments. The mind accustomed to the vast scarcely ever excels in the minute. But in the works of the Divine artist, we see both exemplified. That power which moulded the solid globe into its form, paints the wing of the butterfly, and weaves, with intersecting muscles of the most delicate texture, the iris of the eye. He who lights up the sun, as the centre of a system of worlds, and regulates the distances and motions of the planetary bodies, fits up the lenses of the organ of vision, and fixes at its proper distance, with the minutest accuracy, the nervous screen which is to receive the rays of light. In all the most finished productions of the works of art the microscope can detect defects, the smoothest polish is course and rough, and the most beautiful regularity appears clumsy. In the works of God we find precisely the reverse, the greater the magnifying power the more beauties and wonders, of exquisite skill and workmanship, we perceive. The wonderful power of the Creator is equally displayed in magnitude of form and compass of movement, the vastness of which cannot be taken in by the mind; and in what has delicacy so fine that the unassisted eye cannot detect it. He who formed the elephant, made the mite. He who made that stupendous system of worlds, which at such inconceivable distances whirl around the central sun, made the blood-vessels, and nerves, and the digesting apparatus, and all the fitting up and mutual adjustments of the several organs and parts in the microscopic animalcule, thousands of which are necessary to constitute a speck of sufficient magnitude to be visible to the human eye. With what emphasis do all his works declare, that "the Almighty is excellent in power."

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* That is, supposing its speed to be as much as twenty miles in a minute.

Let us now inquire, what are the conclusions which, from these views of the Divine Being, which we have already taken, we are warranted to draw respecting his MORAL PERFECTIONS. How terrific would be the thought, if it could be for a moment entertained, that infinite power and wisdom might be employed, in an improper manner. But a few moments' consideration will convince us that this is impossible. All the moral qualities of any rational being may be, perhaps, resolved into these two—JUSTICE and BENEVOLENCE.

JUSTICE "has respect to the persons and rights of others." * As this great and awful Being, who is at the head of the universe, who has created all things, possesses power unlimited over all the works of his hands, how shall we be satisfied that he will never so act as to inflict a wrong on his creatures? To which momentous inquiry it may be replied with confidence, that we have this security in those perfections of his Divine nature which we have already considered. His infinite wisdom renders mistake, on any occasion, impossible. He always sees things as they are in their nature and consequences. Every act of injustice or wrong supposes a mistake. Every crime is a practical error. If a person inflicts an injury on another by withholding what is his due, or by any act of violence or aggression, relating either to his property, or character, or person, without knowing or intending the wrong, the action, in its character, is still injurious and wrong, though he is acquitted from criminal intention; but still, if the aggressor had the means and opportunity of knowing what was right, and neglected to avail himself of them, he is considered culpable; and much more so, if his mistake in judgment arose from the indulgence in evil passions which obscured his reason, and prevented his discernment. If a man commits an injury, knowing at the same time that he is doing

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* Grove's Moral Philosophy.—Vol. II. p. 329.

wrong, he is still laboring under an erroneous impression, he chooses evil under the semblance of good; he supposes that it will promote his happiness, while he is evidently preparing misery for himself, and thus at the same time injuring two parties,—the immediate object of his wrong, and himself. As, therefore, every act of injustice appears to involve a mistake, and the Divine Being, who is infinitely wise, cannot err, we conclude that injustice is impossible with him.

And, farther, his supreme glory and dominion, as the Creator and Proprietor of the universe, assure us that he cannot be otherwise than just. The temptations and occasions of committing crime, which lead men to acts of injustice, can never exist in the case of this exalted Being. Even in the most depraved characters we can scarcely imagine how wrong can be done purely for the sake of doing wrong; there is some object in view which gives occasion to the misdeed. It may be the fear of losing something which he possesses, or the hope of acquiring what he has not; it may the dread of punishment for what he has done, and the desire of concealing what he knows to be criminal, or the belief that the person whom he desires to injure is out of the reach of common justice:—these and many similar things, which it is needless to mention, generally form the occasions of the injuries and wrongs which men inflict on others. It is rarely, if ever, that acts of palpable injustice are committed without some such occasions. But with the glorious Being of whom we are now speaking, it is utterly impossible that any such occasions can occur. He is infinitely exalted above the reach of them all. There is nothing which he can fear, nothing for which he can hope. There can be no object of dread to omnipotent power and independent existence; there can be no object of desire which is not possessed by him who is the proprietor of the whole universe. As, therefore, nothing can appear to infinite wisdom right which is wrong, and no occasion can possibly arise which could be an inducement to the supreme Lord of all things to commit any act of injustice, we may confidently affirm that justice, in the highest perfection, is his; that he is "righteous in all his ways, and holy in all his works."

That BENEVOLENCE, in the highest degree in which it is compatible with wisdom and justice, belongs to the Deity, there can be no reasonable doubt. We have proofs of this continually and every where. Volumes might be written on the innumerable forms of Divine goodness which appear through all his works. Delightful as is the theme, it is unnecessary for us to enlarge on what must be so manifest to all who observe and think. There is not a single department in the economy of nature, that is not pregnant with illustrations of the Divine benevolence. Do we not see it in all the arrangements of the Solar System?—in the great source of light and heat that blazes in the centre, that all the dependent bodies might share in those important benefits,—in the adjustment of those forces by which the planets are kept moving in their orbits,—in the inclination of the earth's axis to mitigate the cold of the polar regions,—in the moon and stars, by which the nightly firmament is lighted up and studded with sparkling gems,—in the revolution of the earth on its axis, in order that every part should be successively turned to the sun, and enjoy the benefit of its rays? Look at the properties of the atmosphere, the arrangements made for the due supply of water, the fertility of the soils, the great variety of minerals, and the supply of vegetable productions, to serve for food in health and medicine in sickness; observe the innumerable forms of beauty and grandeur with which the heart is delighted and refreshed as we gaze on the works of nature; observe how pleasure and enjoyment are connected with every sense:—it is delightful to see, to hear, to touch, to taste, to smell: there is enjoyment in the very consciousness of being; in all the social affections which sweeten the domestic circle, bind man to man, and form the links of society: in all the charities of the heart, which are blessed in blessing, how conspicuously does the diffusive benevolence of a good and gracious Being shine! But where shall we stop? the theme is boundless: "How excellent is thy loving-kindness, O God; therefore the children of men put their trust under the shadow of thy wings." "Bless the Lord, O my soul, and all that is within me, bless his holy name. Bless the Lord, O my soul, and forget not all his benefits."

We shall proceed, in the third and last place, to consider what views we are justified in forming of the GOVERNMENT of God. This may be regarded in two aspects: His PROVIDENTIAL Government, which has reference to the well-being of all his creatures; and his MORAL Government, which relates to the conduct of rational beings.

That God does exercise a providential government over all his works; or, in other words, that he exercises a constant care and unlimited control over the objects of his creating power, seems to be a just and natural inference from the premises already established. As all owe their existence and the continuance of that existence to him, all creatures must ever remain dependent on him, and subject to his will and pleasure. It is most unreasonable to suppose that he should abandon, as unworthy his regard, what by his own power he had brought into being. From the nature of things, every portion of matter and every living creature must be constantly present to him; and we cannot imagine that he who willed their existence should be indifferent to their welfare. His providence, therefore, must be particular as well as general: he who cares for the whole, must care for every part, seeing the whole is nothing but an aggregation of parts. The supposition that it would be derogatory to the dignity of so great and glorious a Being, to pay attention to what appears to us minute and trifling, is a mistake which seems to arise from a partial and superficial view of the subject. It is a transfer of the limitations and imperfections of our own minds to the infinite Creator. When we contemplate an aggregate, we lose sight of the parts in detail; when we inspect the minute, we are obliged so to concentrate our minds, that we cannot at the same time take in amplitude. But these limitations can have no place in that infinite Being whose omnipresence fills all space, and whose omniscience includes all knowledge. However insignificant many things may seem in themselves, yet in their relation to the great whole, no atom of matter, no act of mind, no occurrence in any of the departments of nature, can be considered trifling. In the great chain of events, some links appear to us great and prominent, others seem almost imperceptibly small and insignificant, yet the greatest depend on the least, and the absence of one of the latter would produce an alteration in the whole depending series. The fate of an empire may depend on the fall of a pebble. To how great an extent has the condition of Europe been influenced by the life of one single individual! And by how many little incidents, from his infancy to the period when he commenced his public career, may his very existence have been affected! Every such incident, then, was connected with the present state of the nations of Europe, and by this with the future condition of the whole world. Who can imagine what would have been the present circumstances of the human race, if the infant Romulus had perished in the waters of the Tiber? It is reasonable, then, to infer that the Great Being on whom the whole is dependent, must exercise his superintendence over its minutest fraction. And have we not proofs without end, that his wisdom and power have been employed in the formation of all living things;—that his benevolent designs embraced all the minutiæ of animal life? Why, then, should it be supposed that any thing on which he has expended his power and employed his wisdom, and in the production of which his benevolence is so richly displayed, should ever be abandoned by him, or be viewed with indifference? We conclude, therefore, that all things in heaven or earth, however great or minute,—that all creatures, of every rank of being,—that all events, of all kinds, are under the superintendence and control of him who is, "wonderful in counsel, and mighty in working."

There are two distinct views which have been taken of the manner in which this superintendence is exercised by the great Governor of the universe, both of which, however, imply the universality of his providence. It is conceived by some that the great Creator, having brought all things into being, gave to universal nature laws, by which, as a machine once set in motion, it goes on without any subsequent act of power or interference of its Maker, accomplishing "the good pleasure of his will." In this case all things are evidently subject to his control; inasmuch as these laws continue only in such a manner and for such a time as he sees fit; consequently, whenever he pleases, he has power to alter, to suspend, or abrogate these laws; all nature, therefore, continues what it is, and proceeds as it does, just according to his pleasure and during his pleasure.

The other view taken of this subject is, that there is an immediate and constant superintendence exercised over the whole creation; in this view it is considered that all which we term the laws of nature, are but the operations of divine power, in a certain and uniform manner. And are there not some considerations which tend strongly to favor this opinion? Reflect for a moment on the universal law of gravitation, according to which all matter attracts and is attracted, with this remarkable condition, that its power depends not on the simple ratio of the distance, but inversely on the squares of the distance. Take, now, the sun and the earth, ninety-five millions of miles distant from each other, and yet, according to the phenomena of gravitation, every particle in the mass of each body exerts an influence on every particle in the other. How can we conceive of any material agency acting in this powerful manner where it is not, and at a distance so immense? Describe in your imagination the vast circumference which bounds the Solar System, with a compass which stretches its span to one thousand eight hundred millions of miles: around the central sun the primary planets are revolving at their respective distances, many of which are again the centres of secondary planets, which, attendant on their primaries, performing their revolutions also round the sun, obey the law of gravitation; and to every point of this stupendous circle, every particle of the sun and of every planet, primary and secondary, is sending forth a power or exerting an influence; and every single atom is ever, according to the received theory, acting on every other atom throughout the vast system, and yet these emanations from every particle to every particle, in every direction, never interfere with each other, nor obstruct each other's operations. Who can have any conception of the mode of such action? The utmost philosophy can say in explanation is, that the results are as though there were such action. And would it not be quite as philosophical, and more satisfactory, to resolve these phenomena into the constant energy of Him who fills all space, thus exercising his power continually, or, in other words, willing that results should follow each other in such an order? Look again at that mysterious something which we call life, or vital power, in vegetables and animals; that power by which the embryo seed unfolds, throws out its roots, attracts to its capillary tubes certain particles, and such only as it needs for its further development, assimilates these into its own substance, and forms gradually the stem, the leaves, the calyx, the blossom, and, finally, by the formation of a curious organization, brings about a reproduction of a new plant similar to the parent stock. Look at animal life, mark the properties which it imparts to an organization which is the subject of it, to resist to a certain degree the action of physical agents, such as air, moisture, and heat; to decompose all the foreign substances from which it derives nourishment when taken into the stomach, and from them to form new combinations, which shall supply every tissue, every vessel, and every organ, and finally to produce other living beings with similar parts and organs. Who, we ask, can explain these mysteries? There is much of chemical action, there is much of mechanical operation in the physiology of animals and vegetables, but there is, besides, what neither chemistry, nor mechanism, nor physical action of any kind can explain,—there is a vital power, —that is, there is the presence of a mysterious agency which none can understand or imitate. What, then, it may be asked, is this mysterious agency, which we call the vital power, (which term explains nothing,) but the invisible and untiring energy of Him who "lives through all life," and "by whom all things consist?" Does not, also, that connection of any of the phenomena of nature, which we term the relation of cause and effect, seem inexplicable on any other principle? How can we understand in any other way why the motion of one body should be communicated to another; or how matter should act at all on matter, when, in all probability, no two particles are ever in actual contact? The presence of an omnipotent agency, enforcing his own laws on his own creation, seems at once the most simple and the only satisfactory solution that can be given.

Perhaps the very uniformity and constancy of these laws, the fixed connection between causes and effects, so that like causes produce like effects,—perhaps the very regularity of the course of nature, is one cause why the constant agency of the Divine power is not more distinctly recognized. But the uniformity with which certain effects are linked to certain causes, by which one particular result is seen to follow a particular condition that preceded it, is absolutely necessary to our welfare, indeed to our very existence. How is it possible that any course of action could have been commenced, that any provision could have been made, that any precaution could have been taken, if it had been a matter of uncertainty what effects would follow from any given causes? If fire had sometimes produced heat and sometimes cold, if a stone let fall from the hand had sometimes descended, and at others, had moved in a horizontal direction or glanced upwards, if at different times the same external objects produced opposite sensations, if the impressions on the organs of sense were followed by very different perceptions, if there had not been fixed and constant laws for the succession of the various phenomena, we could have calculated on nothing, all would have been uncertainty and confusion; reason would have been worthless, instinct useless, or rather neither could have existed; and the whole frame of nature would have been only a wild and disordered chaos. To say the least, we can have no conception how such a state of things could have been compatible with the welfare of sentient and rational beings. That the divine energy works throughout nature with this uniformity, appears to be the result of wisdom and goodness, adapting the whole to the condition of the creatures which he has made.

With this unremitting superintendence we must not connect the exhaustion which we feel by continued effort: infinite power knows no weariness. Its exercise must be very different from that of human power; —it is not muscular action, nor mechanical force, but, as far as we can understand, the mere volition of his will; perhaps more nearly resembling those acts of our own will, by which, without any feeling of exertion, we put forth a power which is instantly obeyed by any of the voluntary muscles. Such is that act of power, the description of which, by Moses, is quoted with admiration by a heathen writer, "God said, Let there be light,—and there was light."

These two views, however, differ merely as to the mode of action, and amount to the same thing, as far as our argument is concerned: one, supposing His omnipotence exerted in the single act which bade creation yield obedience to fixed and certain laws; the other, regarding what we term laws, as one continued act, as the constant and uniform exercise of His power. Whichever view we adopt, they both lead to this conclusion, that as all things were brought into being by the great Creator, and received their original properties from him, so all things are dependent on him and under his superintendence.

But though the whole course of nature, so far as physical causes operate, be considered as under his control, how, it may be asked, can those events be subject to his direction which depend on the conduct of voluntary agents? To which it may be replied, that as long as rational beings act voluntarily, their acts are undoubtedly their own, and they are, in such cases, to all intents and purposes, free agents, as every person must feel, who considers the workings of his own mind, without embarrassing himself with metaphysical difficulties. But still, as the condition and the conduct of rational beings depend much on those physical agencies, the laws of which are the ordination of divine wisdom, and the execution of which is secured by divine power; as the manner in which the body and the mind mutually affect each other is the appointment of the Creator; and as the laws of mind as well as of matter originated with him who is "the Father of Spirits," he must have all the events which depend on voluntary action as much under his cognizance and control as those which result from the action of mere physical causes. However great, then, may be the difficulties, to our comprehension, attending the administration of an economy so vast and complicated, we must conclude, from the view we have taken of the Divine perfections, that the great Governor of the universe will bring the whole scheme of providence to such an issue as shall be in every respect worthy of himself.

But do the views which we have hitherto taken of the Author and Governor of nature, authorize us to form any conclusions respecting the MORAL GOVERNMENT of the great Creator? By moral government we mean that control which is exercised over the conduct of intelligent beings, by a system of rewards and punishments suited to their rational nature. That man possesses faculties which render him a proper subject of such control, none, we presume, will doubt. He has a capacity of thinking and reasoning; of perceiving the nature and relation of things with which he is conversant; of discriminating between right and wrong; of refusing what he perceives to be evil, and choosing what he apprehends to be good; and of reflecting with approbation or disaprobation on those intentions which give to every action its true character of good or evil. This power of voluntary action, combined with his capability of perceiving the nature, and grounds, and consequences of an action, renders him responsible for his conduct in any given case. On this responsibility, according to his several relations to his fellow-creatures, he is ever acting. As a child amenable to his parent, a servant to his master, a subject to his sovereign, the sovereign himself to the laws, he recognizes his accountability; in every situation of social life there is and must be some responsibility which guides and controls his actions. If, then, the several relations of society impose duties which are of indispensable obligation, can the relation which man sustains to the great Being who created him, to whom he is indebted for ten thousand comforts, by whose power he is preserved in existence, and on whose goodness he is ever dependent, be alone without its duties? Can it be supposed that the nearer the connection and the more complete the dependence, the less there is of duty involved in the relation? Is it not the dictate of reason, that every living being with which man is in any way connected is entitled to certain duties from him, appropriate to the relation sustained, from the lowest animal that ministers to his wants or pleasures, to the great Fountain of existence who is at the head of the universe? And if there are duties owing to the Creator and Preserver of men from all his intelligent creatures, can any one be guiltless who neglects to inquire what these duties are, or who refuses a practical recognition of them; or, can we imagine that "the Judge of the whole earth" will make no distinction between the obedient and disobedient?

But by what law is the morality of man's actions to be determined? Certainly by the will of the Supreme Creator, if that will can be ascertained; and that will must express what is right and proper in the view of Infinite Wisdom. From the present condition of man, we are led to infer that the primary law, the law of nature, was not left on perishable records, nor trusted to traditionary transmission: amidst all the waywardness, and folly, and crime of man, do we not perceive distinct traces of a law written on the tablets of his heart, interwoven into the very texture of his nature? It seems as much a matter of feeling as of reasoning, that some things are right and others wrong, and that intrinsically considered, independent of their consequences. Notwithstanding all the theories, the object of which is to confound virtue and vice, by making them entirely dependent on circumstances, and thus to annihilate the essential distinctions of right and wrong; notwithstanding all the caprice and disorder of the passions, and the unaccountable eccentricities of individuals, is there a man, who does not, at some times, at least, reproach himself, or indulge a feeling of complacency, according to his judgment, of the moral fitness and propriety of his actions? Has there ever been a nation or an age, however peculiar in its usages or strange in its manners, that has considered lying, and stealing, and cruelty, and ingratitude, in themselves virtues;—and truth, and honesty, and kindness, and gratitude vices? * A

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* Perhaps the case of Sparta will be cited as an exception, in which state private theft was permitted, if it could escape detection, while severity of punishment followed its discovery. But it is obvious to every one who has considered this peculiarity of Lacedemonian legislation, that it was the toleration of a private injury, to secure what was considered a public advantage. Situated as was their little state, and dependent only for its safety on its superior military prowess and habits of constant vigilance, the object of this peculiar license was to foster, on the one hand, a watchfulness that should be never taken by surprise; and, on the other hand, to encourage a vigilant and enterprising hardihood, which would lose no advantage for want of quickness in perceiving it, dexterity in contriving and putting into action means to obtain it, or courage to risk the consequences. The dis-

reverence or fear of some superior power, whose favor it was important to obtain, and to whom worship should be addressed, a sense of accountability to some invisible being, and an apprehension that crime would be followed by punishment which no earthly power could evade, have been found in more or less distinctness, and in all ages and countries, though exhibited in various ways. Nor does it at all invalidate this statement, that some few tribes of men may be found so sunk in barbarism, as to indicate but faint traces of any such law; its characters, as might be expected, grow more distinct and legible, in proportion as man rises in the scale of being. Interest, however it may bribe the judgment and pervert the reason, cannot entirely obliterate it; passion may produce a mental intoxication, but when it subsides, the law resumes its force; the frequent endurance of the reproaches of the internal monitor may continually lessen the moral susceptibilities; but we presume there are few, if any cases, in which the most hardened villain does not, at times, perceive these faded characters of a long-neglected and often violated law brightening into appalling distinctness, proclaiming his baseness and announcing his punishment, like that mysterious writing traced by an invisible hand on the palace wall, which horrified the impious king of Babylon, and at once pronounced his guilt and doom.

And what, it may be asked, are the sanctions which enforce this law of nature? From the remarks just

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honor and the punishment which followed detection, still showed that, in itself, it was not considered otherwise than as a vice.

made, it is evident that it cannot always be violated with impunity. The remorse and self-reproach which to a certain extent attend its infractions, and the delight of conscious virtue, are by no means to be disregarded. These consequences are, at least, a part of those sanctions by which it is enforced. The exercise of every virtue brings with it a degree of satisfaction and pleasure, that often goes far towards balancing any inconveniences with which it may be attended. The vicious not only deprive themselves of this gratification, but commonly entail on themselves both remorse of conscience and bodily suffering. But here a question of most awful import suggests itself: Are these the only sanctions by which this law is guarded? Are these visitations of remorse, which in the case of the hardened sinner are repeated at more distant intervals as he proceeds in crime,—especially when by his vices he triumphs, obtains wealth, acquires honor,—are these lashes of a guilty conscience, which after a time almost cease their ineffectual attempts to reclaim him, and seem to abandon him without check or restraint to his headlong passions, as an incorrigible offender, whose doom is sealed; are these the only punishments of the wretch who makes thousands miserable, sacrifices with ruthless indifference the happiness of all around him to his own baleful passions, and lives only like a malignant fiend, to plague and torment others? Is there no truth in those mysterious and awful whisperings, which, in all ages, have suggested to the guilty wretch an invisible and almighty avenger, and a retribution in a future state? Is there no recompense for oppressed and suffering virtue, trampled under foot, defamed, and scorned, beyond the consciousness of right?—Is there no ground for those hopes and longings after rest and compensation in another state, which have so often supported virtue in its severest trials? We have already shown that he who is at the head of the universe is a God of justice, that he has the most true and correct perceptions of all that is right and proper, in all his creatures, and in all circumstances. He must, then, view with approbation or disapprobation the actions and conduct of men, according as they agree or disagree with those perceptions of what is right. It is, therefore, an inference which appears justly drawn from these premises, that this approbation or disapprobation will be expressed in a manner that shall become him as the sovereign Lord of all, and be suitable to the purposes of his government. And that, if the peculiar circumstances of this state do not admit of this full expression, there will be ultimately, in a future life, such a retribution as shall inflict on vice and transgression a condign punishment, and amply indemnify all the sufferings of virtue.

But here nature pauses,—her voice is silent: reason is at fault, and can go no further. Revelation must now become our teacher: from no other quarter can we derive any satisfactory answers to the numerous, the deeply interesting, and inexpressibly important questions that arise. That such a revelation has been given, and that its evidences and its purport are most satisfactory, it will be our object at some future time, if health and strength permit, to show.

Before we conclude this part of the subject, it will be expected that we notice some objections which have been stated to the views which we have taken. Why, (it is sometimes asked,) if a Being of infinite wisdom be the Creator of all, do we see so many creatures which are apparently useless, and whose existence seems rather like freaks of nature than the results of intelligence and wisdom? What end can be answered worthy of such a Being, by the creation of many of the species of birds, and beasts, and reptiles, and insects, with which the world swarms? To this we reply, that in every one of those species on which man may look with contempt, and which atheism may assign to chance, there are such inimitable arrangements, and so curious an organization as could result only from designing wisdom; and if there is so much of design in its formation, why should we suppose that there is less in the position which it occupies in the system at large, or that there is no important end answered in its creation? If we cannot see in the wide range of existence the important use or beneficial end of each, it does not follow that there is no such use or end. An almost endless diversity, amidst a general uniformity, seems to characterize the works of the Divine Being. And do we not perceive, in all the astonishingly diversified forms of living creatures, the exhaustless power and skill of the great Creator displayed? And who will have the presumption to fix the limits of this variety, or to state what creatures should or should not be made, or what is the degree of excellence to which it is right for omnipotence to limit itself, in the material forms to which life is given? Wherever life is given, the capability of enjoyment is bestowed; being itself may be considered as a boon. And is the wisdom of the Creator to be impeached, because Divine benevolence distributes its bounties in various ways and different degrees? Have we a sufficient knowledge of the whole system, with the connection and dependencies of all its parts, to pronounce any portion of it superfluous? In every department of nature we see evidence which leads to a completely opposite conclusion. The elementary constituents of this globe and its furniture, the combinations of which they are susceptible, and the laws which regulate their changes; the atmosphere, the water, the vapors, the various soils and produce on the surface, and the minerals beneath it, all have their appropriate use. Besides the important part which vegetable productions perform in the general economy of nature, their variety serves many valuable purposes of animal life; they furnish the food and medicine, and in a great variety of ways contribute to the comfort and enjoyment of man. It appears, by the researches of naturalists, that there is not a plant that grows, nor a leaf put forth by any tree, that is not the means of sustenance to some living creature. Among the animal tribes, many which might appear at first as useless, seem, after having enjoyed a portion of existence themselves, to be the appointed means of subsistence to others. Even the infusoria, those minute specks of living matter, which, though floating in unnumbered myriads through the waters, were for many ages undetected—even these serve for food for animals of another class; and many of a higher order contribute to sustain the life of man. How many parts of the internal economy of the human frame were viewed, some ages ago, as perfectly useless, simply because their uses were not known. But so many have been the discoveries made by modern science, of the important functions of what had been supposed to be superfluous appendages, that upon the detection of any minute part that may have escaped former observation, the inquiry is immediately commenced as to its peculiar office, it being assumed almost as an axiom that every part must have its use. If, therefore, every part of every plant or animal,—if every constituent part of this globe, with all its apparatus,—if every element, every combination, every organ has its appropriate use;—if many of those very parts, or relations, or laws, which formerly appeared superfluous, are evidently found, upon a more extended knowledge, all to have their beneficial and important uses, may it not be the same with that very department which now furnishes the objection? And is it not a fair inference, drawn from a very general analogy, that it only requires a more complete acquaintance with the various bearings and relations of the whole system of nature, to perceive the use of every thing which now appears superfluous?

But the objection on which the greatest stress is generally laid, is the great amount of existing evil. How, it is asked, can we suppose that a being of infinite wisdom, and power, and goodness, is the Author of a system in which we see so many evils prevailing, and to such an extent? In the very course of nature we perceive frequent deviations from its beautiful and beneficial regularity; showers become inundating storms, winds become tempests, and those powers of nature which, in their ordinary operations, are productive of so many benefits, put forth their strength in frightful tornadoes or volcanic eruptions. In all animate beings we see a large portion of sufferings, and those which are inevitable are greatly increased by the wickedness of man. Can a world pregnant with so much misery, deformed by so much vice, be under the administration of an Almighty Power, of infinite wisdom and rectitude? That this is a subject which presents great difficulties, we do not attempt to deny; they have occupied the minds of men in every age, and no solution which has been offered can completely remove them. Some of these, however, admit of an explanation which ought to satisfy every reasonable mind; many of them will appear considerably mitigated and lessened, by considerations which ought to be taken into the account; and if there exist any which are quite inexplicable, we can at least account for our inability to explain them.

As to those deviations from the ordinary course of nature to which reference has been made, as evils in the present system, a careful consideration of these phenomena will show, that, strictly speaking, they are no irregularities, but proceed from laws which are constant and uniform; and that their most terrific exhibitions appear to be, in many cases, and perhaps may be in all, necessary to the well-being of the system. That, for instance, the law which regulates the phenomena of electricity is as accurately obeyed in the lightning's blaze, as in all those silent and unobserved operations in which it so eminently subserves the purposes of animal and vegetable life; and that its wildest commotions are eminently beneficial. If those laws, by which nature is governed, so interfered with each other as to derange its course, and endanger the permanence of the system, then the objection might be forcibly urged; but while all these apparent irregularities are the result of laws the most uniform in their operations, and tend to the benefit of the system, there is rather reason to admire the wisdom which framed, and which guides the whole, than rashly to call it in question. That Divine wisdom might have established other laws, and governed nature in a different manner, we have no reason to doubt; but to say that any other laws, and a different mode of administering the economy of nature, would have been on the whole better, is beyond the province of any to determine.

The liability of all creatures possessing animal life to suffering, is not unconnected with results of a most beneficial kind, which should not be overlooked. The object of pain, appears to be, to give timely notice that the system is suffering injury, and not only to warn but to compel to instant measures of precaution or relief. The essential interests of the system must be guarded by something more vigilant in its attention, and more certain in its operations, than mere reason: it is on this principle that the beating of the heart is secured by an involuntary power, and that the keen sensations of hunger and thirst prompt us to seek the necessary supplies. Pain is a sentinel ever on the alert, whose voice is faithfully raised, when the body is likely to suffer, and whose language must be heard, and cannot be misunderstood. Nor should it be forgotten, that our happiness is often much heightened by the occasional inconvenience of pain. The man can scarcely enjoy repose who never feels fatigue, nor is ease ever so delightful, as when it follows occasional suffering.

But it may be said, that there is much more evil than can be accounted for, in this way, than can be necessary as a precaution against danger, or prove beneficial, by its occasional presence, in its influence on our actual enjoyment. This is admitted: the amount of bodily suffering and mental anguish, in the present state, is, indeed, great. But let it be again considered, that this is a world of sin and vice; and ought not such a state of things to be marked by interruptions of happiness, and visitations of evil? Admit that the highest order of the earth's inhabitants, that its only rational beings have departed from rectitude, that there has been a universal defection in their obedience to the great Creator, and less surprise will be felt that so much misery should follow so much vice. Should a world abounding with moral evil be a paradise of sweets? Should not a world of sin be a world of suffering? That exclusive enjoyment should reign amidst universal transgression, would not, as far as we can perceive, become the character of the righteous Governor of the universe; it would be like a bounty on crime.

But still the question is pressed on us, why was evil, either moral or natural, permitted to enter into the fair creation, to mar its beauties, and to spoil its happiness? Could not an intelligent Creator, possessing boundless wisdom and power, have prevented this? And if perfect rectitude is an attribute of his nature, how could he permit it? That evil has entered, and established itself in the world, and that there exists an infinitely wise, and powerful, and righteous Governor of the universe, are propositions which atheism affirms to be contradictory; and since the entrance of evil is an undeniable fact, the other proposition, it affirms, cannot be true. The state of the argument then, as far as this objection goes, is this:—on the one hand, we have proofs without number, and of the strongest kind, that a being exists, of unbounded power, supreme intelligence, and transcendent goodness, to whom, as the great Creator, we trace the existence of all things;—against this, is placed the contradiction, be it real or supposed, between the prevalence of so much evil and the existence of such a being. It must be remembered at the same time, that the evil on which the objection is grounded, is not pure, unmixed, and universal, but commingled with a large amount of good. Now, whether of the two is the greater difficulty,—to resist the evidence which meets us every where, which is so varied in its kind, so numerous in its instances, and yet in each separate and individual case, so strong and unanswerable; or, to consider the contradiction, like many others of less importance with which we frequently meet, as only apparent? On the one hand, we have a truth pressed on us with a strength of evidence which has produced conviction in the minds of the wisest, and greatest, and best of men in every age; on the other, a difficulty which we cannot understand. When such a case occurs in common life, we never yield up the evident truth on account of the difficulty, but conclude that there are some unknown circumstances or views of the case which create the difficulty, and which, were we in possession of them, would remove it. I appeal, then, to the reason and the candor of my auditory, of that part of it especially, who, while following in the ranks of scepticism, profess to be inquirers after truth, whether, with such preponderating evidence as that which we have produced, the conclusion is not fair and rational, and unspeakably more satisfactory than its opposite, that the alleged contradiction is only apparent; and that our incapability of solving the problem, does not prove that it is incapable of solution?

The following considerations we candidly submit as deserving attention; and feel assured, that if they do not throw all the light which may be desired, on a subject so mysterious, they are at least sufficient to forbid the presumption of a rash and hasty conclusion, on the ground of a difficulty, in the face of so much evidence.

Is not a degree of imperfection necessarily attendant on a created being? He is not, cannot be absolutely as the Creator. The great First Cause is the only necessary, self-existent, and immutable Being, who cannot by necessity be otherwise than he is; that is, it would involve a contradiction to suppose it. No created being can be what he is necessarily; he cannot, therefore, have necessary immutability. He is not, in his own nature, free from the possibility of change: it is possible that he may at another time be different from what he now is. He cannot, then, have absolute perfection,—he cannot be, by necessity of nature, free from evil. What is possible, may happen without a contradiction. Man, therefore, however high in the scale of being, and though without any original bias to evil, might deteriorate, unless the Creator should prevent it by an act of his own power.

Is not a liability to evil, inseparable from liberty of choice, and necessary to free agency? If man had been created with an impossibility of falling from that state, where could there have been any test of his obedience?—what virtue would there have been in his fidelity?

Does not a partial evil sometimes produce a general good, and an amount of good so great as to render that which was in itself, and separately considered, an evil, relatively and on the whole a good? Wearisome labor, fatiguing application of mind, self-denial, are in themselves evils; yet how much happiness results from them and depends on them? Cannot we recollect many incidents of our lives, that we felt for the time being as evils, and which, independent of their consequences, were so,—and yet, we now see that so much of our subsequent happiness depended on them, that we are thankful for their occurrence. Misfortune in business, sometimes proves the foundation of future success. And even a certain amount of folly and misconduct, though in itself a serious evil, and against which it is the duty of every one cautiously to guard, may yet be the means, and often has been the means, of teaching such lessons and awaking such feelings and sentiments in the mind, as have subsequently given the strongest power to the virtuous principle, and led to the most confirmed habits of rectitude. Every person of observation must have seen instances, in which the penitent recollections of past misconduct have so wrought on the mind, as to produce characters the most eminent and distinguished in the ranks of moral excellence, who have far outstripped others, who, from their youth, have kept on the even tenor of their way, with a mediocrity of virtue.

Does not a state in which good and evil are so blended as to afford opportunity for the full development of character, and the exercise of every virtue, accord with our idea of a probationary state, the inequalities of which shall be fully adjusted by the rewards and punishments of a future life? Do not the sufferings, the trials, and the temptations of such a state, while they afford a test of character, call forth the liveliest exercise of compassion, benevolence, generosity, and give an opportunity of showing, in a high degree, the love of truth, fidelity, integrity, and every grace that can adorn the human character? And does not such a state, viewed in connection with the retributions of a life to come, seem to afford the best opportunity for developing all the principles of moral government?

That may appear to be wrong with a certain measure of knowledge, which a more comprehensive view will show to be right. The child thinks that the restraints placed on his inclinations, and the discipline to which he is subject, are all against him: when his mind expands, and he is able to take a more enlarged view, he perceives the propriety of the whole. A person with very little knowledge of the laws of nature, will not believe that the sun is larger than the earth; and that the latter is in constant and rapid motion round the former. To affirm that the sun is more than a million times larger than this globe, and that it does not move round from east to west, are to him most palpable contradictions; and yet a higher degree of knowledge explains the mystery, and sets all right. So, with our present limited knowledge and means of judging, there may be much that may appear to be wrong and contradictory in the present system; whereas, if we were capable of taking a more enlarged survey of all its connections and results, and its bearings on God and man, on this and on other worlds, on time and on eternity, where we now stand astonished at the mystery, we might admire the wisdom, and exclaim, "righteous and true art thou in all thy ways, O King of saints."

And I would ask, lastly, whether it is at all likely that we should be able, with our limited powers, to comprehend the plans of an Infinite Mind? Can we expect a child to enter into all the views and projects of his father, or to comprehend all the financial details, the political relations, and the various interests which enter into the plans of a statesman who guides the affairs of an empire? Place before a school-boy, just acquiring the rudiments of arithmetic, the profound and elaborate analysis of Laplace to determine the secular inequalities of the planets:—here are words and letters which, as insulated portions, he may understand, and perhaps, by dint of application, he might here and there discover a simple operation of multiplication or division, and think he had done wonders; but these are blended with a number of mystic characters and unknown operations, of the nature and connections of which he has not the slightest perception; and, without any idea of the surpassing ingenuity and compass of mind which the process exhibits, and the important results to which it leads, it is all confused and mysterious to his apprehension; he has no experience to guide him, no means of judging of the whole: as far as his perceptions go, there is no order, no proposed end, and it is only by the most implicit reliance on the superior capabilities of the mathematician, that he believes that method pervades the whole, and that an important result is obtained. Now, there is an immeasurably greater disparity between the highest powers of human intellect and the Infinite Mind, than between the understanding of a child and the most exhalted genius that ever adorned human nature. Is it likely, then, that we should be competent to the task of explaining every part of the Divine administrations?—Is it surprising that we should find what appear to us as contradictions which we cannot reconcile, and difficulties which we cannot solve?—Are we in a capacity to determine what, on the whole, and in the great result is right, when we see but a small part of what is yet incomplete? If we cannot, therefore, explain the difficulty, we can account for the existence of what may confound our judgment and nonplus our understanding, by the obvious impossibility that a limited mind should comprehend the plans and workings of an Infinite Intellect, which embraces in one mighty whole, all creatures, all worlds, all time, and all eternity.

Let me now, in closing, remind my auditory how completely coincident, as far as it goes, is the knowledge which nature gives, with that which is imparted by divine revelation. It is delightful to observe the accordance of the works of God with the word of God. Nature, indeed, speaks by signs, which it requires the exercise of reason rightly to interpret; revelation speaks by words, and pronounces with authority its decisions on sacred and moral truth. I need not refer you who are in the habit of reading the scriptures, to the expressive language in which the eternity, the self-existence, and independence, the immutability, the infinity, the spirituality, and the unity of the Divine Being are so often presented to our mind;—in which the inspired writers descant on the wisdom and the power, the justice and the mercy, of him who is the Creator and Governor of all things, the benefactor and the judge of rational beings. It was the contemplation of these divine attributes and perfections, which filled the minds of the sacred writers with solemn awe and unspeakable delight; which filled their hearts with holy confidence, and their tongues with praise; which gave them assurance of safety, whatever dangers might threaten them or calamities befall them; which gave them peace amidst all the storms of life, enabled them to rejoice in the prospect of death, and filled their bosoms with the joyful anticipation of having a fuller and a brighter vision of his uncreated glories in the world of eternity.

Let me congratulate you, my Christian brethren, that in the sacred scriptures you have the deficiencies of nature's light supplied, and all the information imparted which is necessary to your present peace or future welfare; that where nature and reason stop in the information which they are able to impart, you have "a more sure word of prophecy, whereunto ye do well that ye take heed, as unto a light that shineth in a dark place." How unspeakably important are the inquiries which you here find answered: "If a man die, shall he live again?" "How can man be just with God?" Will the great Governor of the universe pardon transgression? How, and on what terms, and to what extent may pardon be obtained? What will be the consequences of dying unforgiven, and what the result of having obtained mercy? What will be the nature of the retributions of a future state, and when will they be finally awarded? These, and many inquiries of an interest, incomparably greater than all which relates to human science, or the concerns of this transitory life, are answered with a clearness and precision, which release us from the dreadful suspense of uncertainty on topics so momentous, and afford us "a light to our feet, and a lamp to our path," to guide us to the regions of endless day.

How well adapted to impress the mind with reverence, and to inspire it with sacred pleasure, is the consideration of the perfections and government of such a Being. So great, and yet so good, so comprehensive in his plans, and so minute in his care; whose providence extends to worlds and atoms; who bids the planets roll, marks the flight of a "sparrow," and numbers even "the hairs of our head." "Clouds and darkness" may for a time veil his designs in mystery, but "righteousness and judgment are the basis of his throne." We may, in viewing the wonders of his providence and grace, have occasion to exclaim, "O the depths both of the wisdom and the knowledge of God; how unsearchable are his judgments, and his ways past finding out." But we still add, "shall not the Judge of all the earth do right?" And O, how consolatory is the thought, that, insignificant and unworthy as we are, he, the great Maker and Governor of the universe, "taketh pleasure in them that fear him, in those that hope in his mercy."

LECTURE VI.

THE ATHEISTIC PHILOSOPHY COMPARED, IN SOME OF ITS PRINCIPAL FEATURES, WITH CHRISTIANITY.

COL. II 8.—"BEWARE LEST ANY MAN SPOIL YOU, THROUGH PHILOSOPHY AND VAIN DECEIT."[*]

PHILOSOPHY was originally a term of very modest import, indicating only the love or study of wisdom: those who were engaged in the pursuit of truth and knowledge were thus called philosophers. It soon, however, assumed a more dignified meaning, and indicated that more refined and accurate knowledge of nature and morals, which the learned few professed to have obtained. The tenets of philosophy, as maintained by different persons, were not, however, uniform; almost every distinguished teacher had his own system, or made innovations on those systems which had preceded him. It is unnecessary to enumerate the various and jarring sects that arose, each advocating some peculiarity which was opposed by others. In these various systems there generally were some facts of science and some just reasoning, intermixed with a very large portion of sophistry and conjecture; and some of them were wild and extravagant almost beyond credibility. Their philosophical tenets were not confined to the observed phenomena of matter or mind, but their speculations related also to the author of nature, the government of the world, the grounds and obligations of virtue, and the means of happiness. The Jews, though not a people remarkable for their literature, yet had their philosophical sects, or what much resembled these sects in other parts of the world, which had their doctors, and their schools, and their followers, and their distinct peculiarities, both in opinion and practice. Whether the apostle here alludes to any system in particular, among either the Greeks or Jews, is not, perhaps, certain; his principal object being to caution those to whom he wrote, against any of those fallacies, which, though going under the dignified name of philosophy, were nothing better than "vain deceit."

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[*] "*δια της φιλοσοφιας και κενης απατης*." A Hebraism probably, for "through a philosophy which is vain and deceitful,"—or "through a vain and deceitful philosophy." Macknight, "an empty and deceitful philosophy."

How much that has been obtruded on the world, under the name of "philosophy," has been in every sense "empty" and profitless? How many a system, that once had its admirers and supporters, lives now only in the pages of history, as a record of the folly and credulity of mankind! And how often still, are opinions of the most absurd and incongruous nature, linked together into systems and theories, in which conjecture takes the place of fact, sophistry is substituted for reason, and bold assertion supplies the lack of argument! However such opinions may impose on the unwary, they are and must be nothing but "a vain philosophy." Instead of substantial truth, a shadow is grasped; instead of any solid advantage, an imaginary good is possessed, but real injury sustained.

A "philosophy" which is "vain," that is alike destitute of truth and profit, may yet be, on many accounts, as "deceitful" as it is "vain." Error never appears without disguise when it solicits a reception; it always wears the garb and bears the name of truth. Few, indeed, are the erroneous systems in which there is not some admixture of truth; and it is to this very circumstance that they are frequently indebted for acceptance. The most unwholesome error may be so ingrafted on the stock of truth, as to appear actually to spring from it; mistakes of a most pernicious kind may, by practised ingenuity, be so dexterously inwrought with acknowledged truths, as, like a finished piece of mosaic, to render a very close inspection and a nice discrimination necessary to distinguish the several parts, or to see where one ends and the other begins; and thus frequently the whole system, with all its essential and mischievous errors, is received, on account of some few truths which cannot be denied. A "vain philosophy" may also impose on many by a few great names which it may rank among its patrons. The aberrations of the human mind are truly astonishing, and especially among men distinguished for their learning and talents. It is a fact, however it may be explained, that theories so visionary, and opinions so wild and fanciful as would discredit a man of common understanding, have sometimes been originated or maintained by men of great general superiority. Great names, in science or literature, always have their influence; and a few of these will sometimes give currency to great absurdities, and render a "vain philosophy" imposing and "deceitful." A system destitute of truth may, also, have much to flatter our pride, and may thus tend to beguile the mind. If it teaches its votaries to consider themselves as the only free and independent thinkers, while others are the slaves of unreasonable prejudices, and the dupes of an hereditary and widely-spread superstition,—that they alone assert the supremacy of reason, while others are crouching before a despotic dictation,—that they are the select few, who have the courage to examine what others take upon trust, and to ridicule what others treat with veneration and awe,—it will become peculiarly captivating to bold and speculative minds, to whom singularity itself is a proud distinction, and especially to the ardent and inexperienced youth. If, in addition to this, a "vain philosophy" should tend to quiet all the remonstrances of conscience, by denying every thing of which, in the hour of retirement and stillness, it reminds us; by reducing to a fiction of the imagination all the solemnities involved in the consideration of an invisible judge, and a future state of retribution; if by thus removing all the restraints which others feel, it allows a man, without fear, to "walk in the ways of his own heart, and according to the sight of his eyes;" then, it is evident, such a philosophy will have such recommendations to any one who feels these restraints irksome and annoying, who would enjoy the pleasure of sin without its sting, and gratify his inclinations without remorse, as will in all probability blind the understanding to its defects, bespeak the feelings of the heart in its favor, and thus secure an acceptance by its "vain deceit."

Now, is it not obvious that the boasted philosophy of infidelity is of this kind;—that these are some of the principal qualities which render it dangerous? Because, therefore, it comes with the fair promise of leading us into truth, and ingeniously blends its pernicious errors with many things which are acknowledged true, claims a few great names in literature or science as its patrons or disciples, and flatters the pride of man, while it aims to destroy the power of conscience, it is necessary that all who come within reach of its seductions, either by the companions with whom they associate, or the books which are thrown in their way, should be warned to "beware, lest any man spoil[*] them, through philosophy and vain deceit." And lamentable, indeed, would be the result of being thus spoiled. Beguiled, and plundered of the highest sanctions of morality, the most powerful incentives to virtue, the sweetest consolations and the brightest hopes,—what would there remain to man but a slight and short-lived superiority to the beasts that perish?

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[*] *συλαγωγεω.* Properly, to make a spoil of any, as persons vanquished in war, whose property is seized and whose persons are enslaved by the victor. And metaphorically, as here, to deprive a person of any thing by force or fraud.

We have already endeavored to show that the atheistic philosophy is "empty" and "vain," as far as it makes any pretensions to truth. In order to this, we have adduced some strong presumptions that lie against it, which have never been satisfactorily removed; we have examined the various hypotheses on which it rests, and "found" them "wanting;" we have produced evidence which condemns it, so various and conclusive as not, we conceive, to admit of contradiction; we have given the objections which it raises, a fair hearing, and in reply have, we believe, proved them to be groundless. Our principal object now is, to show that it is as destitute of any real advantage as it is of truth, that it is as worthless as it is false, that its assumed superiority is all a fable; and that, therefore, whatever may be its plausibilities, it is in the worst sense "deceitful," emphatically "a vain deceit." We shall endeavor to show, that were we to grant the truth of its dogmas, it would still be worse than useless,—that, were we to leave its supporters in undisturbed possession of their territory, it is only a land barren and dreary, and dark as "the shadow of death,"—that the beauty which they admire, is only a ghastly phantom,—that the object of their adoration cannot, after all the incense which they offer, give one cheering smile to the human race—that their splendid monument of false reasoning and perverted science, is but a decorated tomb, which, beneath all its sculpture and its gilding, and its panegyrical inscription, contains only silence, and gloom, and putrefaction.

As things and opinions are frequently seen to advantage by contrast, we intend to exhibit some of the principal points in which the atheistic philosophy has gloried, in comparison with those very points in that system which atheism particularly condemns and abhors. For it is remarkable, that all the fantastic fooleries, all the extravagant absurdities, and all the barbarous rites of ancient or modern paganism, receive a treatment mild, and polite, and benign, compared with that with which Christianity meets, in the writings of many of the patrons of infidelity. Whatever crimes and follies other systems may be charged with, they cry out, like the Jews of old, "Release unto us Barabbas,—but as for this man, crucify him, crucify him."

But let the comparison be fairly made,—let atheism be judged according to the descriptions and statements of its own advocates; and let an estimate be formed of Christianity,—not as it is disgraced in the lives of many who unworthily assume the Christian name, nor, as it is, when secularized and corrupted, and employed for purposes foreign to its own pure nature and heavenly origin, but as it appears in its own writings, as it is portrayed in the sacred scriptures.

Let me not, however, be mistaken. Far be it from me to concede or intimate that there is any thing like philosophy in the minds of a great many who embrace infidelity in its various gradations. There is reason to fear, there are too many, in whose minds there is nothing systematic but their aversion to Christianity, as a scheme which demands subjection to a holy Being, and which presents objects of terror to a sinful heart. And with too many of the writers on this subject, there is any thing but philosophical reasoning; they deal principally in extravagant vituperation, bold and unwarrantable assertion, and a determination to identify religion with all the abuses chargeable on hypocritical, or ignorant, or bigoted and wicked professors of it. To dignify such trash as frequently issues from the infidel press with the name of philosophy, even of a "vain philosophy," would be a miserable abuse of terms. But there are some, who, to considerable talents and science, add great ingenuity, and who have given to atheism the shape and appearance of a system, and have endeavored to support it by arguments drawn from various branches of philosophy. It is to such writings as these which I refer, which I know are circulated in this town and neighborhood, and to the opinions of those who read and reason on them, however erroneously, when I speak of the philosophy of atheism.

Before we proceed to the points of comparison on which I shall principally dwell, there are a few particulars, in which the two systems may be compared, which deserve some attention.

There is an important difference in the character and aspect under which these systems respectively present themselves to our notice. Atheism is professedly *a philosophical system;* Christianity, *a divine communication.* Consequently, the systems take very different ground, and advance claims of a very different nature.

Atheism, so far as it makes any pretensions to a philosophical system, stands on just the same grounds as the opinions maintained by the ancient Academics or Peripatetics, the Epicureans or the Stoics, each of which had its advocates and its enemies, its period of triumph and decay. Whatever credit may be attached to any such system, on account of the plausibility of its arguments, the ingenuity with which it is constructed, or the great names which it enrols among its supporters, the highest ground on which it can challenge our belief, and claim our acquiescence, is, that it is a well-constructed and well-reasoned system of human opinions, with a probability of their truth. Beyond this, no system of this kind can go; certainty is out of the question. Christianity, on the other hand, stands forward in a character far different, and with claims of another kind. It professes to be not the result of human speculation, "but the wisdom which is from above;" not a plausible theory, but certain truth. Admit all that atheism requires, and it is still but the offspring of human reason; admit the truth of Christianity, and its origin is the Father of lights;—the Fountain of eternal truth.

The one, as founded only on human reasonings, is principally a question of opinion, the other, as professing to be a communication from heaven, is a question of fact. Atheism has no facts which belong peculiarly to its system, on which it can ground its opinions: we have precisely the same facts, and, with what we cannot but consider overwhelming evidence, draw conclusions from them destructive of the atheistic scheme. But

Christianity is entirely built on facts peculiar to itself, which, unless they can be shown to be historically false, ensure, with a certainty which cannot be doubted, the truth of all its communications. Concede every thing to the atheistic scheme which its advocates can, with any show of reason, demand, and still there is room for doubt to operate, and uncertainty to distract the mind: there may be a flaw in the reasoning, some views of the subject may be omitted which would entirely alter the case, the premises may be mere conjecture, or the conclusions may not be justified. Grant to Christianity its facts, and doubt is for ever excluded. Here are books come down to us, and which for many ages have existed, not only in the principal languages of Europe, but in several of the oriental tongues, which were professedly written by persons whose names they bear, and published at or very near the time when the events which they relate occurred, and when their statements, if false, might have been contradicted: these statements, also, are interwoven with many historical events and local peculiarities. Now, whether such writings did first appear, about the time to which they refer, and whether those particulars of general history and local references be accordant with truth; or, whether any age, before or since, can be assigned to these books, and their historical allusions shown to be fictions,—are questions of fact, on which the whole system hinges, and which, surely, we have sufficient historical evidence of the past to determine. And, further, it is affirmed in these writings, published about the time and in the places where the events narrated are said to have occurred, that during the reign of a certain emperor at Rome, and under the government of a Roman magistrate, there appeared in the land of Judea, a most extraordinary person, who professed to be well acquainted with all those great and mysterious topics of inquiry that had long engaged the attention of the wisest of men to little purpose, respecting the nature, and character, and will of the great Creator, the prospects and destiny of man with reference to a future life, the means of man's highest happiness, and the rule of his duty; professing, moreover, to be a messenger from the most high God, sent to instruct and bless his rational creatures: and it is also related in these documents of history, that prophecies which had for many ages been contained in books still extant, were most remarkably fulfilled in the circumstances, character, life, and death of this sacred person; that in proof of his mission he wrought many surprising miracles, which nothing but a divine power could effect; and that, after having been unjustly sentenced to a cruel death, he rose from the dead, according to his own predictions, notwithstanding every precaution taken by his enemies, and after having been seen by many of his disciples repeatedly, he ascended into heaven; and that, according to a previous promise, he bestowed on his followers most extraordinary powers: and moreover, these writings testify that a rite was instituted as initiatory into the community of his followers, which rite we know continues to this day; that another rite was appointed by himself in remembrance of his death, and a certain day in the week observed by his disciples commemorative of his resurrection; all which observances are still maintained in every part of the Christian world. Now, these, with many others which might be mentioned, are facts which can be submitted to the test of historical evidence, and if they can be substantiated—which we believe they can, in the most complete and satisfactory manner—then the truths which Christianity announces, admit neither of reasoning nor of appeal,—our only business being to ascertain what they are; then the precepts of duty which it delivers, call not for discussion, but implicit obedience: on all the momentous inquiries which interest man, there is no longer any room to doubt, but all is certainty. On those great points whose decision is so necessary to our happiness, atheism may profess to give plausible reasons, but still leaves room for the most tormenting doubts; Christianity, by its authoritative decisions, resolves these very doubts, and, by the assured certainty which it thus affords, releases the mind from torturing apprehensions.

From the very different grounds on which these systems professedly stand, and the claims which they respectively make, the consequences of receiving or rejecting either are widely different. Admitting atheism to be true; if we embrace it, what do we gain? If we stubbornly, and through prejudice reject it, what do we lose? If Christianity be true, a reception of its statements, and an acquiescence with its claims, bring unspeakable blessings for time and for eternity; while a wilful and perverse rejection of it incurs a risk the most tremendous that can be imagined.

Another remarkable contrast between the two systems is, that one is a system of belief, the other of disbelief; the one is remarkable for its positive or affirmative character, the other for its negative quality. Atheism discloses no secrets, unfolds no mystery, teaches no truth. It tells us, indeed, to look at nature and observe her laws; but this the Christian does quite as much as the atheist, and the laws and operations of nature have been principally discovered, explained, and illustrated by Christian philosophers, and on Christian principles. But what has atheism to teach but mere negations?—that there is no First Cause, no Creator, no intention in all the beautiful and beneficial arrangements of nature; that there is no such thing as mind or spirit in the universe; no God, no angel, no hereafter for man, no future judgment, no heaven or hell, no rewards for virtue or punishments for vice beyond this life. Its object is, in fact, to teach men to disbelieve what all ages have believed, and to confine within the smallest compass, all the objects of truth and knowledge. Christianity, on the other hand, admits all the truths of nature and of sound philosophy, and encourages, by very peculiar and interesting considerations, our examination of all the objects of creating power; and, in addition to this, presents us with truths which only revelation could disclose, and those of the most important kind, which affect our welfare both in this world and in that which is to come. It answers questions which philosophy could never solve; it teaches truths which reason could never reach. It shows us how man's nature can be purified, and exalted, and raised to the highest dignity; how the simplest mind that is teachable may be made wise unto salvation; how the transgressor may be pardoned; how the weakest may be strengthened to sustain every difficulty, and to vanquish every enemy; how comfort may spring from afflictions, the deepest sorrows be turned into joy, and the most distressing evils be converted into means of the highest good. It is the work of Christianity to resolve doubts,—of atheism to create them; Christianity explains much; atheism declares every thing to be inexplicable. Christianity offers a "light to our feet and a lamp to our path," to guide us through this world to a better; atheism bids us grope our way in darkness to the silent tomb, till an eternal night extends its shadows over us.

Atheism does not, with all its boasted philosophy, meet the wants of man, nor come home to the feelings of human nature. Christianity does, and that in the most effectual manner. How often does the heart of man feel the want of some superior power on which to lean for help and guidance? There are seasons when, sensible of the insufficiency of all earthly aid, it sighs involuntarily and deeply for support which no human being can render. How frequently does the mind, in its calm and thoughtful moments, look with the eagerness of inquisitive desire on the vast regions of truth, of which it can, by its own unaided powers, know so little, and pant to know more of the past, and the present, and the future, of things visible and invisible, the existence of which is either perceived or imagined? There is something within, that indicates responsibility, in a manner which it is difficult to resist, and which feels that a hope of forgiveness is necessary to peace of mind. There are also internal suggestions about a mysterious futurity, and an irrepressible longing after immortality. There is in the mind of man, that which earth cannot satisfy, with all the good of every kind which it has to bestow; so that often in the midst of affluence, and honor, and friendship, and domestic endearments, a something is felt still void, and still unsatisfied. At the very time when the heart thrills with pleasurable emotion, while contemplating the scenes of nature, how often is there mixing with this pleasure, a strange feeling of desire and longing after something more beautiful, and vast and glorious still? In the midst of every thing good, and great, and delightful, in civil or in social life, in nature or in art, whatever relation man may sustain, in whatever situation he is placed, there is an inward pining, a secret longing after an undefined something greater, and better, and lovelier, than all that is seen or enjoyed in this world. These sentiments of the heart, these peculiar susceptibilities of our nature, may be fainter and feebler as man sinks in the scale of rationality; they may be disregarded amidst the hurry of business and the round of dissipation, but they are seldom, if ever, entirely obliterated; they are found in every age, in every climate, in every rank and degree of society, as a part of our mental constitution; and in proportion as man rises in the scale of being, and as he retires from the cares, and strife, and tumult of life into himself, he is conscious of feelings of this kind. Now, Christianity completely meets the wants and feelings of man's nature; it has help for his weakness, truth for his curiosity, and imperishable good for his desires of happiness; it can calm the conscience, silence the fears, and guide the hopes to a blissful futurity; it has objects on which the mind can fix, and, in the contemplation of them, feel all its inward workings and indistinct imaginings respecting the great and the beautiful, the awful and the lovely, satisfied, overwhelmed, and delighted. But, where is this adaptation to man's nature to be found in atheism? What has it for any such feelings and sentiments, but a doubt or a rebuke? Man must, under the discipline of a determined scepticism, learn to silence this inward monitor, to repress these feelings of responsibility, to contradict and deny this capability which is felt for superior happiness, to subdue these cravings after immortality and boundless good, before he can cordially embrace the tenets of atheism or feel satisfied with its unnatural philosophy. In other words, he must, we conceive, do violence to his nature, in order to become thoroughly an atheist.

Whatever benefits the atheistic philosophy proposes to confer, are, according to the showing of its own advocates, confined to a few; Christianity is adapted to all. There are two reasons for this: one is that which we have just mentioned, its contrariety to man's nature; and the other is, that the sophistry of a system so opposite to the general sense of mankind in every age, must necessarily be confined to a few speculative minds. A practical atheism which renounces all belief in a Divine Being, which scoffs at what others revere, and despises those sanctions which others hold sacred, may, indeed, be found connected with the most brutal stupidity; but I am now speaking of its philosophy,—of its speculations arranged into a system, in order to account for the phenomena of the universe, without admitting an intelligent Creator, and to secure, in some measure at least, such as may hold society together, the interests of morality, while rejecting a moral Governor, the responsibility of man to any higher power, and the retributions of a future state. A large portion of society consists of the working classes, many of them men of good common sense, but all of them of limited education, and who, generally, must be incapable of entering into all the refined sophistry, and ingenious subtleties by which the philosophy of atheism is supported. So that, were we to listen to all the panegyrics of the atheist on his own system, we should still feel that its proposed benefits and blessings must be very limited in their extent. "Atheism," says one of its most strenuous advocates, "requires intense study, demands extensive knowledge."* "Atheism, then, as well as philosophy, like all profound abstruse sciences, is not calculated for the vulgar, neither is it suitable to the great mass of mankind."† "It is not, then, for the multitude, that a philosopher should propose to himself, either to write or to meditate: the Code of Nature, or the principles of atheism, as the priest calls it, are not, as we have shown, even calculated for the meridian of a great number of persons."‡ That it should ever become general is, according to this author, what "appears utterly impossible,"§ therefore, he asserts, "this is not the end we can propose to ourselves."§ How completely is the contrast to this which Christianity exhibits? It was announced as a distinguishing feature in the new economy, when the great founder of Christianity first established his spiritual kingdom in this world, that "to the poor the gospel is preached." To comprehend as much of Christianity as is necessary to a participation in all its blessings, does *not* require "intense study, and demand extensive knowledge." It is *not* as a "profound and abstruse science," that it benefits its recipients; but, it is by receiving "the kingdom of God as a little child," that it becomes "the power of God unto salvation, to every one that believeth." While it gives ample scope to a mind capable of ranging through a wide field of truth, and, by its sublime objects, affords exercise to the largest powers, the cordial belief of a few facts is all that is necessary to bring its divine comfort into the mind; a few simple rules or principles, with an upright intention, are sufficient to give and to enforce such a code of morality, as shall lead even the poor and laboring classes to all that is virtuous, and "honest," and "lovely," and "of good report." Christianity does not restrict its bounties to men of any rank or degree of mental cultivation; it labors *for* "the multitude," and it *is* "calculated," and eminently so, "for the meridian of a great number of persons." Christianity looks benignly on the whole world; is adapted alike to the poor and the rich, the bond and the free; announces its glad tidings to "every creature" who hears its "joyful sound;" excites all who have felt its power and enjoyed its comforts to diffuse these blessings to "every nation, and tongue, and people, and kindred;" and will be satisfied with nothing short of universal extension, when "all flesh shall see the salvation of God together."

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* System of Nature.—Vol. II. p. 597. † p. 598. ‡ p. 599.
§ p. 596.

We shall now proceed to a more particular inquiry, concerning the bearing of the respective systems on three important points, MAN, MORALS, and HAPPINESS. We shall institute, with all due regard to brevity, a comparison of the views they respectively give us of man, the influence they exert on morals, and the provision which they make for human happiness.

And first, let us ask how the respective systems stand with regard to their views of MAN. Man is evidently the lord of this lower world; not only is he distinguished by the superior organization of his bodily frame, but still more by those mental faculties which give him so lofty a pre-eminence over all other living beings that inhabit this earth. As both the speculations of the atheistic philosophy and the statements of Christianity profess to throw a light on the nature, and relations, and prospects of man, the excellency or defect of either system may be made apparent by a comparison of both with reference to man. Atheism charges Christianity with being unsatisfactory and debasing; all its views are, according to atheistic writers, chimerical, and its influence degrading: Christianity not only denies the charges, but retorts them. Let us, then, submit the opposing systems to the test of comparison on this point.

What, then, is the origin of this wonderful structure, the human frame? We have, in some preceding lectures, shown how complex are its parts, how numerous are its adaptations, and with what surprising accuracy the whole works. How just are the mechanical principles on which the solid frame-work is built, and how many are the ingenious contrivances for strength, mutual support, and protection of the vital parts, which are exhibited in the bones and joints, and especially in the skull, the vertebral column and the manner in which the head is connected with the spine? How exquisite is the formation of every muscle, with its tendons; how accurately placed, so as to secure the proper motion of every moveable part of the human frame; —and how well furnished with nerves in innumerable ramifications, to establish a communication and a sympathy throughout the whole system. How surprising is the distinct hydraulic apparatus for circulating the blood, after the refined chemistry, which has converted the food into chyle, and that into the vital fluid; and no less so the pneumatic machinery of the chest and lungs; the exquisite construction of the organs of sense, and the complete adaptation of the whole to the world in which human beings exist, and the various productions with which it abounds. And we ask of either system, how it will account for the origin of all these wonders, exhibiting so complete an acquaintance with the principles of mechanism, the most refined chemistry, the laws of hydraulics, pneumatics, and optics? Atheism answers, "It is a production of nature." We ask again, what is nature?—and we are told it "is the great whole that results from the assemblage of matter;" that is, that matter, operating without design or intelligence, by "necessary laws," happened unintentionally to form this crowning piece of ingenious workmanship. We are to believe, then, that on some occasion, a number of the elementary particles of matter, which had been eternally in motion, without any object or any guidance, happened to meet together, just at the same time and place, just of such kinds and in such quantities as to form the bony frame-work of the body, with all its cartilages and joints, and to provide the latter with an anti-attrition liquid, which, as though these senseless atoms had foresight, the working of them would certainly need; that others joined, as though by concert, to stretch out the minute fibres of the muscles, and to sheath them and bind them together, and place them just in that position which it was necessary they should occupy in order to move the bones; and that some, as though they knew how to economize space, passed one muscle through another, or reeved it through a bone like a pulley, or made straps to bind down the tendon in their places; and that others at the same time arranged themselves so as to form a mouth, and teeth, and throat, and stomach; while again their fellows made the gastric juice, or at least organs to secrete it; and another set as industriously arranged themselves into the shape of a heart, furnished with valves, and arteries, and veins, for the circulation of the blood; while their associates, at the same time, as though well skilled in pneumatics, made the lungs, and trachea, and larynx, and took care to provide a valve, lest the food should descend by a wrong tube. All these, however, and a thousand more distinct contrivances, would have been of no use without eyes; but just at this juncture, we are further to suppose, some thousands of particles, that had been wandering about for all eternity, happened to meet just in the same spot, and, as the bone-makers had quite unintentionally left two strongly protected cavities, communicating with that which contained the brain, set about making, on optical principles, a pair of eyes to fit them, some forming the various humors and lenses, and others the retina, to receive the rays, and others the beautiful iris, to regulate the quantity of light; while their companions, with other combinations, made muscles to move the eye in every direction, and eye-lids to protect it, and glands to prepare a liquid to keep it moist; and that this curious structure, made in such a way, was just suited to the air, and the light, and the water, and the productions of the globe, which were to minister to its future subsistence. But this was but one; whether male or female, it must, if alone, have perished. Just then, at the same time, we are required to believe that, as though there had been a mutual understanding, certain other companies of vagabond atoms, which the necessary laws of matter had been driving about from all eternity, in one direction or another, met, and performed the same wonders, with this difference, that one of another sex was made in order to continue the race! What is there satisfactory in this? Is any cause assigned adequate to the production of such effects? Is it possible to imagine a greater failure? Could all the romantic speculations in which eccentric genius has ever indulged, afford any thing more unsatisfactory and visionary? * Now, let us turn to Chris-

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* However modified and diverse may be the theories on which atheism endeavors to account for the existence of man, they appear equally absurd and extravagant.

tianity, and receive her explanation. We are informed, that a Being of infinite wisdom and power, having formed and fitted up this world, made man of the same materials as the globe, and imparted to him the breath of life; and that seeing it was "not good for man to be alone," "a help-meet" for him was also created. That "in the beginning" "male and female" were thus created, with a view both to their mutual comfort and the continuance of the race. Is there any thing unreasonable in this? Here is a cause completely adequate to the effect, by which all the surprising, and beautiful, and benevolent contrivances in man's formation are accounted for in a manner the most satisfactory.

Consider again the marvellous workings of the human mind, and all the phenomena of thought. How profound are the reasonings, how exalted the conceptions, how commanding the genius, which distinguish mind! How numerous and surprising are the discoveries which it has made in every department of nature; how extensive the dominion which it exercises over matter, and the power which it possesses of making all material properties subserve the happiness and improvement of the human race! It recalls the past, anticipates the future, and brings present whatever is remote. How great is the power which it possesses, of abstracting, combining, generalizing, and classifying: what brilliancy of fancy and smartness of wit does it not sometimes display! How strong and tender the affections, how authoritative and dominant the will, which is capable, when a sufficient motive is addressed to it, of resisting all the animal propensities all the excitement of desire, all the allurements of pleasure, all the hope of gain, and all the terrors of death! And how does the atheistic philosophy explain the existence and the origin of such powers? It resolves all into matter and motion. All that is pure in love, that is exalted in friendship, that is tender in maternal regard, is only the result of some mechanical action or chemical affinity. All the bright visions of glory that stood before the mind of a Milton, were but the dance of certain atoms in his brain,—the enlarged conceptions and the profound reasonings of Newton, by which he generalized innumerable insulated facts, and discovered the great law of nature, was only a lucky congregation of certain medullary particles, that, meeting together most appropriately, and in a most fortunate position in his brain, kindled a light that diffused itself through the whole world of mind, and commenced a new era in science. Every virtue that adorns, every grace that beautifies, and every sublime trait of magnanimity that ennobles the human character;—the daring of the hero, the devotion of the patriot, the benevolence of the philanthropist, and the piety of the martyr, are nothing but the properties of that food, which, after having existed in a vegetable form, entered into the composition of the animals on which man has fed; which, having been taken into the stomach and digested, and received into the general mass of blood,—after having passed through all these parts and processes, became all that was brilliant, and powerful, and lovely in mind! This philosophy, in fact, leads to the conclusion, that man has nothing to identify him with his past existence;—that the substance, which at a previous period thought, and reasoned, and felt, now no more belongs to him than it does to the earth on which he lives, or to the cattle which graze on the plain; and that without any one principle of identity he has changed all that constitutes himself some ten or twelve times during his life! And this is the philosophy, which, according to the modest pretensions of one of its advocates, whom we have often quoted, professes to be able, "without recurring to chimerical causes, to explain every thing!" Now, what is the view which Christianity gives of the mind of man? It teaches that it is a distinct and living principle, acting by the organs of the body, indestructible in its nature; and, amidst all the changes which the body undergoes, remaining identically the same; that, endowed with properties which belong to no material substance, it is for a time connected inseparably with the body, but that, itself a spirit, created by the great "Father of Spirits," in his own "image and likeness," it is capable of existing in the presence of its adorable Maker, of perceiving his glories, and enjoying his favor, when the mortal body shall be slumbering in the tomb. Admit the truth of atheism, and all is dark, dubious, and unsatisfactory:—admit the truth of Christianity, and information is given, by which the phenomena of both matter and mind are accounted for, and a satisfactory relation established between the effects which appear and the cause to which they are assigned.

But atheism would have us to believe that its philosophy is an ennobling and elevated speculation, while

Christianity is a debasing superstition. The effrontery of such an assumption must be evident on a moment's comparison. Atheism teaches, that man in his best state is nothing higher nor better than a beast of the earth, with a physical organization superior to his fellow beasts; that, by certain necessary laws of unconscious matter, he came into being without either design or end; that here he has no relation to any thing but matter, whose forms are ever varying and perishing; that he is tossed about on the uncertain billows of an ever fluctuating state, as chance may befall or fatality compel him; that in a few short years he will suffer a complete annihilation, and have no more existence than his dog, or than the worm which is crushed beneath his feet: in a word, that his origin is chance, his life a vapor, and his prospects an eternal blank. Christianity, on the other hand, teaches him to look to the glorious Creator of all worlds as his Maker and Governor, to consider himself allied by his immortal spirit to myriads of the highest order of created intelligences, and to the Infinite Spirit himself; and it shows him a land beyond the grave, points to a deathless existence in a world where all his powers, now so contracted and confined and interrupted in their exercise, shall have ample room to expand, and the most glorious objects to employ them. Go, says atheism, go, weary mortal, worn out with the perplexities of a mysterious existence which nothing can explain, exhausted with the cares and pains of an evanescent and worthless being, lie down on the bosom of thy mother earth, sink contentedly into the undisturbed quiescence of nonentity, and render back all that now composes thee to nature, to form new combinations, and to live again in some other form. Ennobling prospect—all that thinks, and feels, and reasons in man, must go into corruption; and the very particles which formed the soul of a Bacon or a Locke, may successively form the sensorium of a worm, a spider, a bat, and an ass! Glorious philosophy!

The next point to which we proceed in our comparison, is that of MORALS; and this opens so wide a field, that we must, as much as the subject will admit, contract our survey and condense our remarks. That atheism should make great pretensions to morality may appear very strange, whether we regard those high and powerful sanctions to virtue which it denounces as chimerical fancies, or the results which have generally attended an adoption of its tenets. Yet, surprising as it may seem, its advocates laud it to the skies, as teaching the purest and highest morality, by enforcing a "system of nature," while all religion is despised as a demoralizing superstition. Before we make our comparison, let us hear the parallel of contrast which a celebrated patron of this philosophy draws.

"Every thing that has been advanced," says the author I now refer to, "evidently proves that superstitious morality is an infinite loser, when compared with the morality of nature, with which, indeed, it is found in perpetual contradiction. *Nature* invites man to love himself, to preserve his existence, to incessantly augment the sum of his happiness; *superstition* teaches him to be in love only with formidable doctrines, calculated to generate his dislike; to detest himself;—to sacrifice to his idols his most pleasing sensations, the most legitimate pleasures of his heart. *Nature* counsels man to consult reason, to adopt it for his guide; *superstition* portrays this reason as corrupted, as a treacherous director, that will infallibly lead him astray. *Nature* warns him to enlighten his understanding, to search after truth, to inform himself of his duties; *superstition* enjoins him not to examine any.thing, to remain in ignorance, to fear truth; it persuades him there are no relations so important to his interest, as those which subsist between himself and systems which he can never understand. *Nature* tells the being who is in love with his welfare to moderate his passions, to resist them when they are found destructive to himself, to counteract them by substantive motives collected from experience; *superstition* desires a sensible being to have no passions, to be an insensible mass, or else to combat his propensities, by motives borrowed from the imagination, which are as variable as itself. *Nature* exhorts man to be sociable, to love his fellow-creatures, to be just, peaceable, in~~dulgent~~, benevolent, to permit his associates to freely enjoy their opinions; *superstition* admonishes him to fly society, to detach himself from his fellow-mortals, to hate them when their imagination does not procure them dreams conformable to his own; to break through the most sacred bonds, to maintain his own opinions, or to frustrate those of his neighbor; to torment, to persecute, to massacre those who will not be mad after his own peculiar manner. *Nature* exacts that man in society should cherish glory, labor to render himself estimable, endeavor to establish an imperishable name, to be active, courageous, industrious; *superstition* tells him to be abject, pusillanimous, to live in obscurity, to occupy himself with ceremonies; it says to him, be useless to thyself, and do nothing for others. *Nature* proposes to the citizen for his model, men endued with honest, noble, energetic souls, who have usefully served their fellow-citizens; *superstition* recommends to his imitation mean, cringing sycophants; extols pious enthusiasts, frantic penitents, zealous fanatics, who, for the most ridiculous opinions, have disturbed the tranquillity of empires. *Nature* urges the husband to be tender to attach himself to the company of his mate, to cherish her in his bosom; *superstition* makes a crime of his susceptibility, frequently obliges him to look upon the conjugal bonds as a state of pollution, as the offspring of imperfection. *Nature* calls to the father to nurture his children, to cherish their affection, to make them useful members of society; *superstition* advises him to rear them in fear of its systems, to hoodwink them, to make them superstitious, which renders them incapable of actually serving society, but extremely well calculated to disturb its repose. *Nature* cries out to children, to honor the authors of their being, to love their parents, to listen to their admonitions, to be the support of their old age; *superstition* says, prefer the oracles in support of the systems of which you are an admitted member, trample father and mother under your feet. *Nature* holds out to the philosopher, that he should occupy himself with useful objects, consecrate his cares to his country, make advantageous discoveries suitable to perfection the condition of mankind; *superstition* saith, occupy thyself with useless reveries, employ thy time in endless disputes, scatter about with a lavish hand the seeds of discord, calculated to induce the carnage of thy fellows, obstinately maintain opinions which thou thyself canst never understand." *

In this comparison, let it be observed, that it is Christianity to which reference is here especially made, and which is designated a "superstition." It was not to expose the errors and rebuke the fanaticism of pagan idolatry that the work was written; to undermine and destroy Christianity was its obvious design, though reasons existed at the time of its publication, why the author should be somewhat guarded in his expressions, and make use of general rather than of specific terms. † It is also worthy of remark, that here almost every thing that is unnatural, cruel, licentious, and base; every thing that virtue hates and man abhors; every thing which destroys individual happiness, poisons the comforts of domestic life, and disorganizes society, is attributed to the influence of religion! But is this Christianity? Is the charge thus intended to be made against it, true or false? Is it a fair representation, or a foul slander? Let us examine.

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* Syst. of Nat.—Vol. II. pp. 438—441, Chap. entitled "THEOLOGY NOT MORALITY."

† For the same reason, probably, the work goes under a feigned name. Though it bears the name of Mirabaud as its author, who died at the advanced age of eighty-six, in 1760, the work was not published, it appears, till ten years after his death, and is generally believed to be the production of some other person; —perhaps I should say persons, as the glaring contradictions which are found in it would lead to the supposition that different parts of it were written by different individuals.

That the most extravagant vagaries have, in different ages of the world and in various circumstances, assumed the name of religion, no one can deny. But what is this to Christianity? It must also be acknowledged, with deep regret, that the state policy which has, in most of the governments of Europe, made Christianity national, has given a most incongruous exhibition of that "kingdom" which is "not of this world;" that this procedure has too often, while ingrafting a form and a creed on the vices of the human heart, secured a support for despotism, and lent itself to persecution; and that excesses, which outrage the spirit and contradict the precepts of Christianity, have claimed the sanction of its name. But is Christianity to be charged with abuses, which in the strongest terms it condemns? We also remember that in France, where this was first published, all that was licentious in manners, both in the court and in the clergy, was combined with the most ridiculous superstitions, the ignorant and intemperate zeal of bigotry, and not unfrequently with a deep hypocrisy and cruel fanaticism, which tended to hasten on that frightful catastrophe which buried, in one common ruin, both the altar and the throne. But, all the crimes of Nero might as well be charged on civil government, or the fatal qualities of the poison imputed to the pure water in which deleterious drugs are infused, as these excesses be attributed to the holy and benevolent spirit of the gospel. And it is further granted, that wherever Christianity has existed, and in whatever form, some have professed its sacred name whose conduct has dishonored it; the friendship of these, Christianity rejects, their alliance she repels with indignation, and limits all the blessings which she bestows to those whose lives are regulated by the precepts of the gospel.

Having made these concessions and explanations, I ask of the most confirmed disciple of atheism now present, who has read the New Testament, made himself acquainted with the life, and doctrine, and precepts of its founder, the exhortations and examples of his chosen apostles, and who has considered the preaching and the practice of those who are living under the influence of Christianity, and making it the great business of their lives, whether the comparison is fairly made,—whether such charges are true—whether such are the genuine features of Christianity? Does it command man to extinguish his desire for happiness, or to sacrifice any pleasure worth enjoying, which does not lead to misery? Has it nothing to say of "abounding in hope," "rejoicing with joy unspeakable," of a "peace which passeth all understanding?" Does it not secure advantages in "the life which now is," as well as in "that which is to come?" Is it true that it forbids us "to examine any thing," that it tells us "to remain in ignorance, to fear the truth?" Does it never exhort us to "prove all things, and hold fast that which is good?" Do the sacred writers never appeal to our reason on the evidences of Christianity, and the claims of its Founder to a divine mission? Is our reason ever required to yield to faith, except when a higher authority speaks, and when the subject is beyond its grasp? Does the religion of the gospel aim to annihilate "the passions," and reduce ourselves "to an insensible mass?" Why, then, are so many rules given us to guide and regulate these passions, so that they may be the means of good, and not of evil? Had the divine Author of Christianity no sensibilities, and did his apostles forbid us to "rejoice with them that do rejoice, and weep with those that weep?" Where is the precept of the gospel that teaches us to persecute and massacre those who do not "maintain our own opinions?" Is it in the inculcation of that charity which teaches us "to believe all things, to endure all things, to hope all things," or in those precepts which enjoin us to render blessing for cursing—or in his example who, when loaded with execrations and suffering undeserved torments, breathed out the prayer "Father, forgive them, they know not what they do?" Who can be ignorant that conjugal love is blessed and sanctioned, that parental affection is encouraged, that filial obedience is enjoined? Where is the precept written, or the example recorded, which urges us to "live useless to ourselves, and to do nothing for others?" Does it not command us to "do good unto all men,"—"to visit the fatherless and the widow, and the sick in their affliction?" Where is "abject pusillanimity" encouraged? Is it in such exhortations as those which direct us, "by patient continuance in well-doing, to seek for glory, and honor, and immortality?" Has Christianity done nothing, is it now doing nothing to encourage institutions which are designed to benefit the body and instruct the mind?

Are there no heroic exertions, is there no self-devotion to be seen in those efforts of benevolence which are made in the East and West Indies, among the ices of Greenland, or in the scorching climes of the equator? Does Christianity cherish no warm feelings of attachment for our native land or our fellow-countrymen? Was there no love of country in those labors which sought assiduously "the lost sheep of the house of Israel,"—or in those tears which were so profusely shed over Jerusalem—or in that "great heaviness" and continual sorrow of heart, which, amidst all his cares, and labors, and successes, still pressed on the mind of an apostle for his countrymen, the Jews? But it is unnecessary to proceed; it must be evident to every candid mind, that if this author had endeavored to exhibit a perfect contrast to all that Christianity is, and all that it commands, he could scarcely have drawn a more complete picture.

And observe farther; *Nature* teaches a man "to augment his own happiness," "to consult reason," "to enlighten his understanding," "to search after truth," "to moderate his passions," "to love his fellow-creatures," &c. We admit that reason and conscience, when passion does not drown their voice, and they are listened to, will show that these things are right and proper. And Christianity, instead of overlooking them, gives light to reason, and power to conscience to enforce them. All that nature teaches, Christianity teaches, and much more. Christianity has a voice where nature is silent; she decides where nature doubts; she unfolds to the view, objects of commanding power, and deepest interest, and holiest influence; to enlighten, and purify, and exalt, and strengthen nature. Christianity is not the foe, but the best friend of nature. Her kind and benignant influence prompts to every thing which can benefit an individual or a state,—raises the standard of morals, elevates every noble sentiment, and, expanding the heart with charity, sums up the whole of its precepts in one word, "love;" for "love is the fulfilling of the law." If hesitation should ever occur as to the line of duty to others, she supplies a principle of universal application; "all things whatsoever ye would that men should do to you, do ye even so to them." And if any duty or course of action should occur, to which no specific precept applies, a general rule is given in such terms as these:—"Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue, and if there be any praise, think on these things."

A candid examination of what Christianity is, will not only prove, that the charges advanced against it, are unfounded calumnies, but will show that we are justified in asserting, that, besides exhibiting a purer and more elevated system of morality than atheism can inculcate,—defining more accurately its duties, and affording a greater number of illustrious examples, it possesses means and motives to restrain crime and to promote virtue, to which the atheistic philosophy is an utter stranger. In order to prove this, it is not necessary that we should enter into any elaborate disquisition on the nature of virtue, and the grounds of moral obligation. A slight reference to the morality of atheism, and the sanctions by which it is enforced, will show that it is essentially deficient in those very points in which Christianity excels. The following is, I presume, a fair sketch of the atheistic system of morality. The great object of man's pursuit, is and ought to be his own happiness; to secure this, he must put a degree of restraint on his own passions and desires; and as his happiness is partly dependent on others, among whom he lives, he must refrain from injuring them, lest they injure him, and confer benefits on them, that he may in return receive benefits again.* Now, it must be observed, that whatever virtue this philosophy approves, or whatever vice it condemns, all the reward of the one and the punishment of the other belong to

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* "Pleasure and pain, the hope of happiness, or the fear of misery, are the only motives suitable to have an efficacious influence on the volition of sensible beings: to impel them towards this end, it is sufficient these motives exist and be understood: to have a knowledge of them, it is only requisite to consider our own constitution; according to this, we shall find we can only love those actions, approve that conduct, from whence result actual and reciprocal utility; this constitutes VIRTUE. In consequence, to conserve ourselves, to make our own happiness, to enjoy security, we are compelled to follow the routine which conducts to this end: to interest others in our own preservation, we are obliged to display an interest in theirs; we must do nothing that can have a tendency to interrupt that mutual co-operation, which alone can lead to the felicity desired. Such is the true establishment of moral obligation."—System of Nature, Vol. II. p. 428.

"He (i. e. man) will allow, that to conserve himself, to secure this life, to the brief mortal existence of the virtuous or vicious individual. Atheism looks no farther, and declares that all beyond is a blank, an eternal nonentity. What, then, is to support virtue, when that very virtue is unpopular, when it brings only misery, and poverty, and scorn; or when, after enduring the vexatious persecutions of the ignorant, the bigoted, and the interested, in the consequences of which all that are dear to him share, the sufferer sees nothing before him but an ignominious death? Can the abstract love of virtue support a man under all this; when a compliance with the custom of the times, and a conformity to the practices of others would bring comfort, and prosperity, and honor? But it may be said he would suffer in his own esteem, were he to act otherwise than according to his own standard of right and wrong. Be it so; will not his views of the standard or rule of duty be affected by the recollection that it is his duty, and should be his object, to enjoy as much of happiness as this fleeting life will allow, and that nothing can indemnify him for

his own permanent welfare, he is frequently obliged to resist the blind impulse of his own desires; that, to conciliate the benevolence of others, he must act in a mode conformable to their advantage; in reasoning thus, he will find out what virtue actually is: if he puts his theory into practice, he will be virtuous; he will be rewarded for his conduct, by the harmony of his own machine; by the legitimate esteem of himself, confirmed by the good opinion of others, whose kindness he will have secured: if he acts in a contrary mode, the trouble that will ensue, the disorder of his frame, will quickly warn him that nature, thwarted by his actions, disapproves his conduct, which is injurious to himself; to which he will be obliged to add the condemnation of others, who will hate him."—Vol. II. p. 437.

a loss in this respect? Will virtue, in such a case, apart from his happiness, and contrary to it, appear much more than an empty name; and will he be likely to sacrifice to it all the substantial good that he can ever enjoy?

And further, as, according to the atheistic philosophy, it must be the sum of a man's desires and duty, to make as much of this life as he can, to have those gratifications which he values most highly, what should bind a man to be virtuous, whose propensities, whether constitutional or acquired, lead all the other way? Suppose a man should say, I feel unspeakably more happiness in wine, and revelry, and libidinous pleasures, than I can in any virtuous self-denial which you recommend: if you are happy in abstemiousness, I am happy in indulgence, you go your way, and I go mine; we are both fulfilling the end of our being, we are enjoying the happiness we prize, each in his own way. What, in such a case, could be objected to him? The graver atheist might, perhaps, reply,—But, in so doing you are constantly living under excitement, you are shortening the very term of enjoyment, you are preparing for yourself an early grave. Might not the ardent voluptuary retort,—This is the only way in which I can be happy; the "necessary laws" of nature have made me what I am; I am accountable to no one in heaven or earth, providing I do not bring myself under the power of the laws: I know the price at which my happiness is purchased, and am content to pay it; "a short life and a merry one" for me. Let the very stuff that life is made of consume with the enjoyment—it is my only heaven; let the taper burn like phosphorus in oxygen, rapidly, indeed, but with a bright, and *brilliant* flame; and when it expires I shall be just as happy as the gravest, and the most temperate, and the most virtuous of men. And who, on atheistical principles, could contradict or blame him?

And what is the check which it has on crime? It is inexpedient, because it tends to misery, by forfeiting the good opinion of others, and by sinking a man in his own esteem. But some men become so hardened in guilt as to lose all sense of honor, and, by repeated acts of sin, almost to paralyze every moral feeling, and to deaden the remonstrating power within their bosom; what then shall awaken a torpid conscience, or impose any barrier to still greater guilt? If the dishonesty of a knave can be concealed, if the adulteries of the debauchee are not detected, if the oppressions or murders of the tyrant be above the reach of law, or if any one of these possesses the means of eluding its grasp, so that he can sin with impunity, what is to prevent him? Let the atheist reason with him on his dishonorable course and his flagrant sin, may he not repel him by saying,—Vices and virtues are but names; pleasure is pleasure by whatever term it may be designated, and this is the only mode, and the highest measure of my gratification. If I can profit by what you call villany, and find gratification in those passions which you call vices, if the possession of wealth, however obtained, if the indulgence in lust or revenge, if the wanton exercise of power be the elements of my happiness, why should I not be happy in my own way? since, as you tell me, no God sees me, no tribunal will judge me, no heaven would reward my virtue, no hell will punish my crimes: I am pursuing the end of my existence, and when my career is closed, I shall be in the same eternal sleep as those whose virtues have been most lauded by mankind. In such a system, then, what support can there be for suffering virtue,—what motive for high and generous deeds, which require the sacrifice of all that is dear in life,—what power has it of restraining vice, and checking undetected or triumphant crime?

Look, now, at Christianity, and mark how transcendently superior to every consideration of temporary utility are the motives which it presents to the mind, and the manner in which it enforces the practice of virtue. First, it assures us that the present state of existence is only preparatory to another which shall never terminate, and that the character of our future immortality, whether of glory or disgrace, of happiness or misery, of safety or of ruin, depends entirely on the manner in which this probationary term is passed; that, in fact, "what a man sows that shall he also reap." It farther points our attention to an ever-present Deity, who marks with approbation every virtuous struggle, and notices with displeasure every incipient crime, while yet it exists only in the desire or intention; it reminds us that we never act without a witness, that in the deepest solitude and in the busy crowd we are alike observed by One who "is of purer eyes than to behold iniquity," without marking it for punishment. It tells the sinner, whom concealment may tempt to an indulgence in vice, that there is One "who seeth in secret, and rewardeth openly." It warns the proud and impious transgressor, who may bid defiance to human laws, that there is a Supreme Judge, who, "without respect to persons," marks every crime; whose vigilance none can escape, whose power none can brave, before whose tribunal the rich and the poor, the oppressor and the oppressed, must alike stand to receive the reward of their deeds; that neither wealth, nor power, nor long impunity, nor death nor the grave, shall screen the offender from the final and impartial scrutiny, or protect him from avenging justice. If the sinner be filled with remorse and penitence, he is not abandoned to despair, nor compelled to consider recovery to virtue hopeless: pardon is promised, "and that by means which speak its value infinite;" and he is encouraged to return, by the assurance that the same grace which forgives his guilt will also renovate his fallen nature, and assist him to "walk in newness of life." To virtue, in all its distresses, though oppressed, forsaken, and scorned by man, it gives this divine consolation and support, that the great Father and Sovereign of the universe beholds him with approving smiles, that he has not forsaken him,—that he never will; and that, if misery be entailed on him in this life by his conscientious integrity, if, by a bold singularity in the cause of truth and virtue, he is dishonored and slighted by his fellow-men, there is a radiant crown reserved for him, which, in another world, shall sparkle on his brows, when, with the celestial and holy spirits of heaven, he shall rest from his labors, and enjoy a full reward for all his sufferings and all his exertions. If any thing can purify the heart, expand every generous affection, support every glorious action, and prompt to every sacrifice which the cause of truth and benevolence may demand, it is such a system, it is such prospects as these! Contrast with this view, and draw your own conclusion, the cold, the heartless scheme, which removes from the mind the idea of supreme and infinite excellence, which destroys the belief in a holy and invisible God, the witness and the judge of human conduct, and treats as useless fictions all the solemnities and the glories of the world to come;—which buries all excellence in the tomb, makes the end of a man and a beast the same, and takes for its motto, "let us eat and drink, for to-morrow we die."

We now advance to the third and last point of comparison, the HAPPINESS which the two systems are respectively capable of yielding. To a person unacquainted with the writings of those who advocate the atheistic philosophy, it would appear in no small degree surprising and singular, to notice in what lugubrious strains they deplore, or affect to deplore, the misery of which men have been the subjects through religion, and to hear its panegyrics on the power of this system to bestow happiness on man. It seems scarcely to be credited, that a scheme which excludes the great Father of mankind from its creed, and future happiness from its prospects, should assert its claims as a benefactor of the human race. That it is the great and the professed object of Christianity to benefit mankind, and in the highest degree and by the most effectual methods to augment our happiness, needs no proof. Let us, then, as we have done in other particulars, submit the two systems to a brief comparison in this respect. There are two things which deserve consideration, in estimating the respective merits of the systems on this point. The happiness which, in ordinary circumstances, each can yield, and the consolation which, in times of trouble and adversity, each can supply.

In estimating the happiness which atheism and Christianity can respectively yield, we notice, in the first place, some sources of enjoyment which are common to both. The necessaries and comforts of life are not limited to any kind of belief; the enjoyment of health and strength, the use of our senses and limbs, domestic pleasures and the sweets of friendship, with all the productions of the globe, the light of heaven, and the air we breathe, are blessings common to all: the beauties of nature, the wonders of science, the pleasures of literature, and the refinements of taste, are equally accessible to the believer and the unbeliever. These are pleasures which the atheist can enjoy, and which are not forbidden to the Christian. But, admitting an atheist and a Christian to possess the same portion of these comforts, there are associations which Christianity connects with them, of so interesting a nature as must tend to give refinement to the pleasure which they yield, and greatly to heighten their enjoyment. What does the atheist see in all these comforts and bounties, but the operation of physical and necessary causes; and what does he perceive in all the loveliness and sublimity of nature, but accidental combinations of matter without intended arrangement, and without design or end? But, when all these are viewed as the works of an Almighty artist, and the exhibitions of paternal wisdom and goodness, in how different a light does every thing appear, and how different are the emotions which these objects excite. The veriest trifle is endeared to us, when it is the gift of friendship; and when all the comforts which the Christian enjoys are traced up to the Giver of "every good and perfect gift," how additionally sweet is the enjoyment of them, and how greatly augmented is their value! What words can fully express the delight with which a review of the mercies of a gracious God has thrilled through the soul, when it has responded to the language of the grateful psalmist, "what shall I render unto the Lord for all his benefits toward me!" Who, that possesses any sensibility of mind, has not, when viewing the beautiful variety and splendid magnificence of nature's scenery, felt the heart glowing and expanding with emotions of the most delightful kind, which the recollection of the still more glorious and beneficent Power that formed them, has turned into adoring admiration and grateful praise? But, let him suppose for a moment, just at the time when the heart is thus full, that no intelligence has formed these wonders, or painted these beauties, or lighted up these glories, but that it all is nothing more than the fortuitous and undesigned combinations of unconscious matter; and the expanding bosom immediately feels a collapse, the glow of the heart is suddenly chilled, and the spirit sighs over all these evanescent forms of accidental beauty. The gifts of nature and the wonders of the fair creation must necessarily lose a great portion of their value, and their highest power of producing happiness, when a beneficent and ever-glorious Creator is not acknowledged.

But atheism and Christianity profess each to have sources of happiness peculiarly its own. What, then, does atheism promise? It offers, first, a more unrestrained license of enjoyment in reference to earthly pleasures. All that an individual feels, would, on the whole, give him the greatest share of enjoyment, whatever be his habits or propensities he is at full liberty to pursue, providing he has the means and opportunity, and is content to pay the price in property, or character, or health. And, in the next place, it proposes to remove all the annoyance which would be produced by a belief that an invisible and Almighty Being is present, observing and recording all our thoughts, and words, and actions. It further guarantees the removal of all fear of the future, so that no punishment in the world to come, no future tribunal or judge, shall at all restrict or interfere with the course which a man means or wishes to pursue. Beyond this, atheism cannot go; and even on its advantages of this kind, there are many serious drawbacks. How few have found, after their most ardent pursuit of those pleasures, and gaieties, and follies which Christianity forbids, that happiness in them which they expected! How many have deeply felt, after having tried them all, that they were but "vanity and vexation of spirit!" And how uncertain is the continuance of all these joys; at best, how transient is their nature! "All flesh is as grass; and all the goodliness thereof as the flower of the field." And what comfort is there in the prospect of the future?

There can be no anticipations of any thing beyond the grave. When the joys of the atheist are highest, and his happiness greatest, if he looks forward, he sees the tomb gaping to receive the whole, and an eternal oblivion ready to cast its deepest shadows over every thing beloved and valued.

Is it asked, on the other hand, what peculiar joys Christianity has to bestow? We scarcely know how in a few words to answer, so vast is the field opened to our view. How supremely glorious and unspeakably interesting are the objects which it presents to the mind, and to which it invites the contemplations; the ever-glorious God, in all his divine perfections, "of whom, and through whom, and to whom are all things;" the Maker, the Benefactor, the Parent, and the Sovereign of the whole universe, "glorious in his holiness," and "rich in his mercy;" it exhibits him in his universal government, as directing all things by his infinite wisdom, and in an economy of mercy displaying in a most impressive manner the wonders of his love and grace, in providing for the restoration of fallen man to happiness and glory. Christianity brings man into the highest and noblest of all relations; it connects him by faith with that adorable and mysterious Redeemer whom "all the angels of God worship," and who gave "his life a ransom for many;" it declares him to be, in a new and peculiar sense, a child of God, and encourages him with filial confidence to call the Lord of all worlds his father; it identifies him with a sacred community, which is called "the church of the living God," the peculiar object of the Divine love and care, which comprises "an innumerable company of angels and the spirits of just men made perfect." And to his admiring eyes it opens a prospect of futurity the most delightful and glorious. It assures him that his aspirations after a happy immortality shall be gratified in a manner far exceeding all his conceptions, in a state the full glories of which, "the eye hath not seen, the ear hath not heard, nor hath it entered into the heart of man to conceive." There, the Christian is taught to expect, his knowledge shall receive a large increase, when faith shall be exchanged for sight, and his powers shall be adapted to a superior state of existence, and able to take an inconceivably wider range than is now possible; that there he shall have a far more distinct perception of the great Sovereign of the universe; see that sacred person whose unbounded love and generous sacrifice procured his redemption; behold those glorious spirits which rank far higher than man in the scale of creation, and all those illustrious patriarchs, and prophets, and apostles, and martyrs, of whose devoted piety and heroic sufferings he has so often read with delight. There he looks for complete purity, for the absence of all those imperfections of which he is conscious in the present life; for a discharge from a warfare between the dictates of an enlightened mind and the animal propensities and passions of a fallen nature. There he expects every social feeling of man's pure nature to be exercised; while he mingles in the society of kindred minds, where all is benevolence of heart, and mistake is no longer possible; where he shall again join those with whom he held sweet converse on earth, without the fear of death or the pangs of parting. To this place he looks as his home, as his rest, to which he is now journeying, and after which he is panting: there his hopes are to be realized, the largest wishes of his heart to be accomplished, and his joys to receive their consummation. In a word, Christianity awakens in the mind every feeling which constitutes an element of the purest and the highest happiness of which human nature is capable; all that is valuable in possession, and that gives a consciousness of safety; deliverance from the greatest dangers and the acquisition of the highest good; the contemplation of all that is sublime in grandeur, or lovely in beauty, or touching in boundless generosity, all that delights the soul in holy love, and tender charity, and grateful emotion, and all that can gladden the heart in prospective joys, in the anticipation of which it is impossible to exaggerate. Now, what are the capabilities of atheism, when compared with this?

That in this world, all are subject to difficulties and distresses, which no prudence can avert, and from which no age, or sex, or station, or character can claim exemption, is a fact which none can question. These interfere with our comforts, abstract from our enjoyment, and often render unavailing the various means of earthly happiness which we possess. In such circumstances, what can the atheistic philosophy and Christianity respectively do for man?

There are two sources of consolation in such circumstances, which atheism can claim, and only two which it can consider properly its own. The one arises from its views of necessity, or what one of its ablest advocates hesitates not to term "fatality." All that any one in any case suffers is unavoidable, it is therefore useless to repine. It is not the ordination of a sovereign wisdom and goodness, that may convert these misfortunes to blessings, but a blind fate, the necessary and unavoidable result of physical causes. If the poor wretch is lame, or halt, or blind; if he pines in misery, neglected of man, beloved by none, and slighted by all; if nothing but disappointment has attended him; if all his schemes have been frustrated, all his hopes blasted, and in return for love he has received hatred, and for kindness ingratitude;—what has the atheistic philosophy to offer for his comfort? The necessity of unavoidable fate. The forlorn and friendless wretch is miserable, he must be miserable, it is his fate, and this must be his comfort. How poor, how shallow, is this cup of consolation! But if this fail, atheism has one more resource. Life and its troubles are passing, both will soon become a nonentity. Death is approaching, your spirit will soon vanish into empty air, your life will expire like a meteor that in its rapid passage gilded the skies, and left nothing but darkness behind it. You will soon be no more; you will have no more existence than the flowers which blossomed before the flood, or the last rainbow that glittered in the heavens, and melted into nothing. Well may the martyr of affliction, the sorrowing mother, the widowed husband, the bereaved orphan, turn to such philosophers and say, "miserable comforters are ye all."

How different are the consolations which Christianity proffers! It assures us that our troubles come nei ther by chance or fate, but that an infinitely wise, and gracious, and righteous Governor of the universe has the control of all events; that he possesses the power of "making darkness light, and crooked things straight;" and that he "out of seeming evil" is "still educing good." It invites us, in all our perplexities, to seek wisdom to guide us, with a certainty that it shall not be withheld; it promises aid to our weakness, and encourages us in humble confidence and prayer to "cast all our care on him who careth for us." It certifies us of the delightful fact, that our best friend will never leave us nor forsake us; that he is "the father of the fatherless, and the husband of the widow," the asylum of the destitute, the hope of the oppressed, and a "very present help in every time of trouble." So that "we know that all things work together for good to them that love God," and that their trials are converted into mercies, and the most painful crosses into the greatest blessings. It teaches us, in fine, to "reckon that the sufferings of this present state are not worthy to be compared to the glory which shall be revealed in us;" for "our light affliction, which is but for a moment, worketh for us a far more exceeding and eternal weight of glory." Compared with such consolations, what are the proffered comforts of atheism but mockery and delusion?

We have seen, then, that the atheistic philosophy has as little ground to boast on account of its professed excellence, as it has on its assumed ground of truth; that it is, in fact, alike destitute of both. It is sometimes said of imaginary excellence, how beautiful this would be were it but true; but atheism has not even this merit. Its aspect on man is the most gloomy imaginable. Christianity raises man almost to the level of an angel; atheism sinks him to a condition but little superior to the brutes; all his excellence it resolves into the perishable forms of matter; his prospects are contracted into a span, and he has nothing before him but darkness, oblivion, and annihilation. Its morals, we have seen, are essentially deficient; it has but little to support virtue, to restrain vice, or to check crime. And as to happiness, it leaves man the sport of chance, or the victim of a blind necessity; seeing in the whole universe nothing on which his hopes can fix as a ground of comfort; no righteous governor, no judge, no friend of the friendless, no refuge in seasons of distress, nothing to indemnify suffering virtue, or to compensate for all the sorrows of this mortal state. And I would on this account earnestly press on those who have embraced this heartless, hopeless scheme, the reasonableness of laying aside all prejudice in its favor. Who can hope to gain any thing from adopting it, but he who seeks, in the dark recesses of its gloom, to escape from the upbraidings of his own conscience, and has reason to tremble if it be proved that "verily there is a God that judgeth in the earth?"

We have also afforded ample proof, that it is totally destitute of truth. We have shown that it is an hypothesis which will not admit of proof,—that there are very strong presumptions against it on the very face of it,—that the principal arguments in support of it are untenable, as being either founded on mere assumptions, or involving absurdities and contradictions,—we have shown that the proofs of a Divine Intelligence are numerous and unanswerable, and that all the objections raised against them, are such as a reasonable mind ought not to entertain,—we have shown that the Great Being who is at the head of the universe, possesses all natural and moral perfections, and is the supreme Lord and Governor of all the creatures which he has made; and now I beg leave, with affectionate earnestness, to address a few parting words to those of my audience who have fallen into the ranks of this species of infidelity.

Of all men, the atheist should especially beware of rashness. Consider, I beseech you, that it is not a light thing to take a stand against the sentiments and reasonings of so large a majority of mankind, many of them men of the greatest independence of mind, the most acute in reasoning, and the most extensive in their observations on nature. Consider, also, if you are wrong, how daring must be the impiety, and how unnatural and atrocious the attempt, to endeavor to blot from the creation the great Maker of the universe, and to fly in the face of Him " in whom we live, and move, and have our being."

The atheist should, of all men, be most eager to examine what others have to allege. None can possibly run such a risk as he does. What risk does the humble and devout Christian incur? If the atheistic scheme were true, and he were at last to be found in error, he now enjoys the most soothing consolations, is animated by the brightest hopes; and if he should sink into a state of non-existence and eternal oblivion, would his perpetual and unconscious slumbers be less uninterrupted than those of the atheist? But should the Christian system prove true, what will become of the atheist?—who is found with his puny arm "fighting against God!" Will he be able to stand before the tribunal of his insulted Maker, with the false, the impious, the daring language of excuse and defence which one of his favorite authors has put into his mouth? *

My fellow-men, and fellow-townsmen, let me, by all that is sacred, entreat you to stop and pause—your everlasting all is staked on the question. And it will soon be decided; our sand is running, our lives are ebbing, our lamps will soon be burnt out, the journey of life will soon be ended, and then—! Allow me to breathe the fervent wish that you may be prepared to enter that world of happiness, of which you now profess to disbelieve the existence. Should the effort which I have made, at no small expense of time and strength, with my many other engagements, be the means of leading you from error to truth, from folly to wisdom, from "the power of sin and Satan unto God," how amply repaid shall I consider myself! I have endeavored so to conduct this argument, as to avoid all unnecessary irritation, even of prejudice itself,—I have addressed you calmly and kindly,—you cannot say that you have not been rationally treated, that you have not been affectionately addressed; but I must, in now taking my leave of you in the discharge of my duty to

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* System of Nature.—Vol. II. pp. 476—480.

my God, myself, and to you, warn you again of the dangerous position in which you stand. If Christianity be true—if God has spoken to man by his works and by his word, by his prophets in past ages, and by the Divine Redeemer in this latter dispensation,—then your present course is one of most imminent peril, and your eternal welfare is in jeopardy. I believe we shall all meet—once more at least, and never perhaps shall we all meet till then—before the judgment throne, before Him who shall award to all, the final retributions of eternity! I take your own consciences to witness—I take the present assembly—I take that awful power, "whose I am, and whom I serve," whose omniscient eye at this moment beholds us—I take heaven and earth to witness, that I have reasoned with you, and counselled you, admonished you, and warned you. If you presist in your present course of unbelief and disobedience, the consequence will be on your own heads.

Let me also urge on the attention of parents and guardians the propriety, nay, the necessity, of making the great foundation of all religion a part of the education of those who are entrusted to their care. Do not be content with merely apprising them of the truths which religion teaches, let them also know the ground on which they rest. This is not the age of implicit faith; the reverence for opinions, merely because they are of long standing and of general extent, is continually diminishing; error has now taken the field, and error of every kind; and it possesses, in the peculiarities of the present times, facilities of access to every highest power of producing happiness, when a beneficent and ever-glorious Creator is not acknowledged.

But atheism and Christianity profess each to have sources of happiness peculiarly its own. What, then, does atheism promise? It offers, first, a more unrestrained license of enjoyment in reference to earthly pleasures. All that an individual feels, would, on the whole, give him the greatest share of enjoyment, whatever be his habits or propensities he is at full liberty to pursue, providing he has the means and opportunity, and is content to pay the price in property, or character, or health. And, in the next place, it proposes to remove all the annoyance which would be produced by a belief that an invisible and Almighty Being is present, observing and recording all our thoughts, and words, and actions. It further guarantees the removal of all fear of the future, so that no punishment in the world to come, no future tribunal or judge, shall at all restrict or interfere with the course which a man means or wishes to pursue. Beyond this, atheism cannot go; and even on its advantages of this kind, there are many serious drawbacks. How few have found, after their most ardent pursuit of those pleasures, and gaieties, and follies which Christianity forbids, that happiness in them which they expected! How many have deeply felt, after having tried them all, that they were but "vanity and vexation of spirit!" And how uncertain is the continuance of all these joys; at best, how transient is their nature! "All flesh is as grass; and all the goodliness thereof as the flower of the field." And what comfort is there in the prospect of the future?

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And, finally, my respected hearers and townsmen, let me give you a caution. You, most of you, profess to hold in abhorrence what you consider pernicious errors in your neighbors: beware that this abhorrence extend not to their persons. Let them not have to complain of persecution; let them meet with nothing like unkindness or contempt. You believe they are in error: shun that error, value the truth, and if you possess it, rejoice in it more than in "thousands of gold or silver;" but let charity and compassion be extended to those whom you consider as deceived, as spoiled "through a vain and deceitful philosophy." Remember that contempt is not argument, and unkindness is not likely to produce conviction. Let your conduct, therefore, be formed on the model of the gospel; let your practice show the superiority of your principles; "in meekness instructing those that oppose themselves, if God peradventure will give them repentance to the acknowledging of the truth."

APPENDIX

TO THE AMERICAN EDITION.

[THE reasoning of the Author of these Lectures upon the existence of God, seems to me so very able and conclusive as not to require any additional arguments upon the subject. Still, as a train of thought somewhat different has occurred to me, which might come in aid of his reasoning, and strengthen the conclusion drawn from it, I have deemed it expedient to make it an appendix to his work.]

The arguments usually adduced in favor of the existence of God, are called the *a priori* and the *a posteriori* argument. I will examine both of them. And first, I conceive that what is called the *a priori* argument, which is intended to prove the *necessity* of the Divine existence *prior* to the creation of any thing in the universe, and without any reference at all to this creation, is in itself utterly absurd. For this *necessity*, in order to operate upon the existence of the Deity, must take place *prior* to the existence itself, which would involve in it two absurdities; one, that a necessity should arise for an event, when by the supposition there was nothing in being out of which it should arise, *i. e.* when there was nothing in the universe to create the necessity; and the other, that this *necessity*, even if it could be supposed, would in itself imply that there was a time when the Deity himself was not in existence; since for the necessity to be a *causa causans*, it must itself exist *anterior* in time to the event upon which it operates. Such a solution then would irresistibly lead to the conclusion, that the Deity was not, in fact, either *self-existent* or *eternal;* not *self-existent*, since he is caused by this supposed necessity, be it what it may; not *eternal*, because a being caused, cannot exist until after the thing that causes it. I know it is said that this *necessity* is not in itself any thing actually existing foreign to the Deity himself, but only an *idea* in our minds, which we are obliged to associate with this existence to account for it. If this be the explanation, I say that it is no *necessity* at all, and does not account for this existence.

Putting then this *a priori* argument aside as entirely unsupported, I come now to the other argument, which is called the *a posteriori* argument, the reasoning from *effects* back to *causes;* and this I conceive not only as entirely satisfactory, but coming almost as near a demonstration of the self-existence and eternity of the Deity, as a demonstration of a proposition in Euclid; as near a demonstration as it is possible for moral reasoning to be. What we now see in existence in the universe, be they animals, or vegetables, or inanimate matter, must either have been created in the first instance by a great First

Cause *anterior* in time to themselves, and propagated in the successive series, which we see to be the course in which they follow each other, by *his agency;* or else the series must have existed from all eternity, and each link have been of itself capable of producing its succeeding one, in the manner in which we see it is produced, without the agency of any cause *foreign* to itself whatever. For it will not do to say, that the eternity of this series, and the manner in which it is continued, may be caused by a supposed *necessity* operating upon it in the first instance, and from that time down to the present in all the successive links, since, as I showed before, a *necessity* for the production of any thing must not only exist *prior* to the thing itself produced, but arise out of something *distinct* from it, which by the supposition can exist no more in this case, than in the case of the Deity as before considered, there being, by the supposition, nothing to produce the necessity. We come therefore to the only supposition which remains, (setting aside the being of the Deity himself,) and this is, that the present series of things, be they what they may, has existed from all eternity, and that each link has been the *efficient* cause of the succeeding one,—in animals, that the parent has been the *efficient* cause of the progeny; in vegetables, that one plant is the *efficient* cause of the succeeding one; and in the material world, that all those circumstances, which are considered the *secondary* causes of the changes that are produced, or the events which follow them, are in themselves the *efficient* causes of them. Now by an *efficient* cause, or a cause *actually producing* an effect, I understand something, let it be of what nature it will, that first *intends* to produce the effect desired, which intention supposes both design and will; then, secondly, that has *power* to produce the effect, by which I mean, that it has *means within its control,* let them be what they may, of accomplishing, with absolute certainty, the object intended, *viz.* bringing to pass the effect desired, without the possibility of failing to do it; and, thirdly, that *understands* perfectly the *mode* in which the effect is to be produced, that is, the *nature of the process,* in all its parts and relations, and combinations and consequences. To exemplify these several requisites to constitute an *efficient* cause in the production of a *plant,* the plant producing another, must *intend* to do so, and so have a *will* and be *capable of design,*—must have *power* to produce it, that is, must have all the means necessary for this purpose, without relying upon any external aid of *any kind,*—and must perfectly *understand* the mode or process, in all its parts, by which it is to be produced. Now it is perfectly obvious that in all these requisites of an *efficient* cause, the plant is wanting. It neither *intends, has power* to produce, nor *understands* any thing relating to the process of germination, or growth of a succeeding plant. This is produced by a train of what are called *secondary causes,* which are in themselves inadequate to the production of the plant, wanting all the requisites named, but only in fact, *materials* and *modes,* by which the plant is formed and vegetates. The same illustration might be given of *animals* and of all effects produced in the *material* world, coming either within what are called the sciences of chemistry, natural philosophy in all its branches, and astronomy; and indeed in every science where any changes or new combinations are effected, in which *matter* is concerned. In all these cases, in the results produced, the causes assigned are clearly inadequate to the effects which follow, and are in truth nothing more than *mere modes of operation.*

If these remarks are just when applied to the material world and to brute animals, that there are no *efficient* causes discernible, how much more striking the fact is, when *man* himself is considered. So far from a man *intending*, *having power*, and *knowing* how to produce the human soul,—the nature of it, its connection with material organization, and dependence upon it in this world, are entirely *unknown* to him, not being seen to have any properties in common with matter, or which matter appears in itself capable of receiving. How then can a man be considered the *efficient* cause of a being like himself, about whose nature he is so entirely ignorant?

I have shown now that the assigned causes in the *material*, *animal*, and *rational* world are not in fact the *efficient* causes of the changes and events produced in the first, and of the continuance of the species in the two last, and also that there can be no such thing as *necessity* operating to produce these effects, since there can be no such thing as *necessity* without something to produce it, which by the supposition there is not; I ask then how can we account for the successive generations of the animal and vegetable kingdoms, and of the changes in the material world; and not only for these, but also for the wonderful *regularity* and *uniformity* which appear in them; that the same species always continue to be so clearly marked and kept so entirely distinct from all others; and that the same combination of circumstances in material things always produces the same result? Why is not a horse sometimes the progeny of a cow, or a dog of a man; and why is it that the head is always on the shoulders, and the nose on the face? Why are these always where they should be, to answer the end which they are found to answer, and in no other place? Why is water always converted into ice by cold, and not into air? Why does a stone always descend, and never ascend? No *necessity* by supposition operates to produce these effects, either *at all* or in a *uniform* manner. *Chance* can have no power to produce these effects, since first there can be no such thing as *chance*, every thing requiring and supposing an *efficient cause*,—even the throwing of dice or the drawing of a lottery, which have more the appearance of chance than any thing else. But even if we could suppose any thing produced by *chance*, the very word implies an *absence* of design, of uniformity, and of plan; and in such a case we might expect to see the world converted into a perfect chaos, some things half animal and half vegetable, some half horse and half fish, some with heads in one place and some in another, and some none at all; some with a nose or ears in one place, and some in another, and some without any; men with only the instinct of brutes, and horses and cows with the reason of men; vegetables capable in some parts of them of seeing or hearing, and men, some of them not having any or but part of the senses. This would be the effect that might be expected from *chance*, as such, if such a thing could even be supposed. But nothing of this kind is ever seen, except in some very rare cases, of what are called *lusus naturæ*, and which seem to be produced for the very purpose of showing that they are a *deviation* from a *uniform* plan, and that chance has nothing to do with it; since, if *uniformity* be the result of chance, there never would be any thing but *uniformity;* if *deviation* be the result of chance, there would be nothing but *deviation.*

I have, I think, satisfactorily shown, that nothing can be produced by what are called *secondary causes,* by what is called *necessity,* or by what is called *chance.* There is therefore but one remaining way of accounting for their production, and that is, that they are produced by some Being, in whom reside the *design,* the *power*, and the *intelligence* necessary for this purpose, and is, in other words, the DEITY himself.

Now the Deity himself being proved to be the Author of every thing we see in nature, he must himself have consequently existed at a period *anterior* to them all. And as we cannot suppose him to have come into being at any particular period, since we cannot suppose any thing to have existed prior to him, to call him into being; it follows therefore that he must be *self-existent* and *eternal.* And since he is proved to be the Author of every thing in the universe, and constantly employed in all the operations that are going on in it, he must be *omnipotent*, *omnipresent*, and *omniscient*; that is, *having absolute control* over his works, *superintending* all of them, and *understanding* all their operations.